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**FEED MATERIALS PRODUCTION CENTER
REMEDIAL INVESTIGATION AND FEASIBILITY
STUDY TUESDAY, OCTOBER 24, 1989
COMMUNITY MEETING**

10/24/89

**SPANGLER REPORTING
145
TRANSCRIPT**

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6 **FEED MATERIALS PRODUCTION CENTER**
7 **REMEDIAL INVESTIGATION AND FEASIBILITY STUDY**

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10 **TUESDAY, OCTOBER 24, 1989**

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12 **COMMUNITY MEETING**
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1 PRESENTERS:

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2 Jim Bischoff, Moderator**3 Superintendent of Ross Schools****4**
5 Ran Hansen, DOE Deputy Site Manager**6 Andy Avel, DOE RI/FS Manager****7 Bob Galbraith, Senior Geologist****8 John Frazier, Health Physicist****9 Joe Yeasted, Technical Director****10 Steve Shirley, Remediation Engineer****11**
12 OTHER PANEL MEMBERS:**13 Catherine McCord, U.S. EPA****14 Graham Mitchell, Ohio EPA****15 Dennis Carr****16 Bob Owen****17 - - -**

1 MR. BISCHOFF: It's 7:30 and the 1151
2 program says it's time to begin. I will try to
3 maintain the agenda as close as possible to the
4 schedule for the evening.

5 Good evening, my name is Jim Bischoff.
6 I'm Superintendent of the Ross School District, and I
7 am serving as the moderator for tonight's program. My
8 role this evening is to be a neutral party and
9 accordingly a facilitator to assure the meeting runs
10 according to the agenda and that two goals are met.
11 The first goal is to give you the opportunity to learn
12 about the most recent DOE environmental activities and
13 ask any questions you may have. The second goal is to
14 make sure the DOE representatives answer your
15 questions and meet your informational needs about the
16 topic at hand in a way that is meaningful to you.

17 Specifically, this meeting focuses on
18 environment cleanup efforts under way at the Feed
19 Material Production Center. We will be hearing about
20 the Remedial Investigation and the Feasibility Study
21 known as RI/FS. You'll be hearing RI/FS probably
22 many times this evening, and again that refers to the
23 Remedial Investigation and Feasibility Study.

24 This is the third public meeting held

1 this year. I would like to express my personal
2 gratitude for your attendance this evening. Those of
3 you from the community present, by being here indicate
4 your caring and desire to be an informed and active
5 citizenship, a strength of our community. People in
6 our community are not apathetic and do come together
7 to address important issues vital to our quality of
8 life.

9 At this time I'd like to begin the
10 meeting by introducing Ray Hansen, DOE Deputy Site
11 Manager. He will bring you up to date in what has
12 occurred here since the last community meeting in May.
13 Ray.

14 MR. HANSEN: Good evening and welcome.
15 I'm glad to see so many of you here.

16 One of the first things I'd like to do
17 is to publicly thank Jim Bischoff for moderating this
18 meeting. What we were looking for was someone that
19 was both well-known and respected in their community.
20 I think Jim fits that bill. Thank you.

21 As Jim mentioned, I'm the DOE Deputy
22 Site Manager. In the past my role at the FMPC was
23 really looking at operational activities. In
24 accepting my new position, I also am accepting

1 responsibility for remediation.

2 At the past meetings, Jim Reafsmyder
3 was usually your host. Jim has recently accepted a
4 position in Oakridge as Deputy Assistant Manager for
5 Energy and Research. Jim has agreed, however, to stay
6 on at least on a part-time basis until we get a new
7 site manager on board.

8 As you know, the FMPC recently had a
9 visit from the Tiger Team. The Tiger Team is one of
10 the new group initiatives to baseline conditions at
11 all the DOE sites. The Tiger Team in reality is an
12 environmental safety and health compliance team. They
13 left us with a draft report when they left. One of
14 the findings in that report was that the DOE
15 organizational capabilities were insufficient to
16 ensure compliance with all environmental safety and
17 health requirements on a timely basis. What that
18 means is we were under staffed. To correct that
19 problem we initiated an intensive recruiting program,
20 which will essentially double the DOE staff. All the
21 new hires will be directly involved in all
22 environmental safety and health activities at the
23 center.

24 With that, I would like to introduce

1 two of our two members. Bobby Davis, would you stand
2 please, Bobby. Bobby comes from to us from an
3 Oakridge operation in Oakridge, Tennessee. Bobby is a
4 certified health physicist and brings 17 years of
5 experience in environmental related activities to the
6 center. Bobby will assume the position as
7 Environmental Manager of the site. He'll be
8 responsible for all the environment and
9 environmentally related activities at the site. Thank
10 you, Bobby.

11 Our second new staff member is Andy
12 Avel. Andy, would you stand, please. We're very
13 fortunate in getting Andy. Andy has been directly
14 involved in remediation activities in other DOE sites.
15 Andy will have responsibility for the Remedial
16 Investigation and Feasibility Study that you're going
17 to hear about tonight. Thank you, Andy.

18 Earlier I mentioned the draft Tiger
19 Team report that we got. That report is available for
20 you to look at. It is available in reading rooms at
21 the FMPC Administration Building and also at the
22 public library in Hamilton.

23 Why are we here tonight? We're here to
24 discuss cleanup, and my first message to you is that

1 DOE is committed to cleanup the FMPC. In addition to
2 what you'll hear tonight, there have been and there
3 will continue to be other cleanup activities at the
4 FMPC. You know we are doing an awful lot of
5 construction over there, investing millions of dollars
6 to ensure that we minimize emissions from the site.
7 We are and have been and will continue to ship waste
8 off the site. All of the construction rubble that is
9 contaminated will also be shipped off site.

10 As you also know, at least I hope all
11 of you do, in July we temporarily suspended production
12 at the FMPC. We did this so that we could concentrate
13 our resources on cleanup. And you also know that one
14 of the results of that cleanup was that today
15 Westinghouse announced that 15 percent of the area has
16 now been declared to be decontaminated. That means
17 your workers and our visitors can now freely access
18 that 15 percent of the site without special precaution.
19 This is an important step we feel in a complete
20 contamination control program that we intend to fully
21 implement by the end of this year.

22 Since 1984 when Joe LaGrone established
23 the site office at the FMPC, the one thing that he
24 stressed and stressed again and again is that we have

1 with you open and candid communication. My second
2 message to you tonight is that we will continue to do
3 so. We will tell you all the good things we're doing,
4 and we'll also tell you the things we've done wrong
5 and that we've found that are wrong.

6 Part of keeping you informed is that we
7 have opened two new reading rooms to make all of our
8 documentation and information more readily available
9 to you. These two reading rooms are located in the
10 downtown Cincinnati public library and also a reading
11 room in the Harrison, Ohio public library. There are
12 flyers available, I understand, in the Community
13 Participation booth that give the locations and the
14 hours of operation. New files called the
15 Administrative Records, which document our activities
16 under the Remedial Investigation Feasibility
17 Investigation Study, have been added to those reading
18 rooms. The files really document how and why our
19 scientists and engineers make their cleanup decisions.

20 Additionally, we're trying to make
21 these public meetings more meaningful both to you and
22 to ourselves. After the May meeting we held about 30
23 interviews with local residents. Those interviews
24 will form the basis of a new RI/FS Community Relations

1 Plan that we intend to issue later this fall.

2 Once again, as in past meetings, you'll
3 find the comment cards, I think there's one on each
4 seat, there's more in the Community Participation
5 booth. Any questions that you feel uncomfortable
6 asking at this meeting, go ahead and submit those
7 questions on the comment cards. Any comments you may
8 have about how we run this meeting, we welcome those
9 comments. we will answer any of your questions and we
10 will do it within 30 days of this meeting.

11 With that, I'd like to turn this
12 meeting back over to Jim and let's start learning
13 about what we're doing at the FMPC. Thank you. Jim.

14 MR. BISCHOFF: I would like to clarify
15 my reasons for agreeing to moderate the program this
16 evening. First, as a community leader in charge of
17 providing a safe learning environment for children, I
18 maintain a keen interest in the activities of FMPC.
19 I've personally been involved with the Emergency
20 Planning and Consensus Committee and served on the
21 joint response in '89 Exercise Management Committee.
22 Most importantly, I live in the community and I have a
23 wife and five children. I believe this has been and
24 needs to continue to be a very special place to live

1 and raise a family. This requires a very active
2 citizenry focusing on the cleanup problems at FMPC.
3 We must make certain the public remains well informed
4 and sustain political pressure to assure continued
5 funding for cleanup at this site. For the record, I
6 would like to state up front that I'm not being paid
7 by either Westinghouse or DOE for this moderating
8 function tonight. I'm also not basically masochistic.
9 I'm here for the reasons stated.

10 The presentation tonight will focus on
11 answering four questions: Number one, what is the DOE
12 finding; two, what is the effect on me as a citizen;
13 three, what is being done to correct problems at the
14 site; and fourth, how can a citizen become better
15 informed and more involved if he or she so chooses.

16 As you can see by the agenda, we begin
17 this evening with approximately an hour of
18 presentations reviewing the status of the cleanup
19 process. After a short break, we'll begin the
20 question and answer section. Microphones will be set
21 up for you, those of you who want to verbally present
22 your questions to DOE. However, if you're more
23 comfortable writing questions than speaking in the
24 mike, you will have the opportunity to do that also.

1 You notice there are four by six cards on your chairs.
2 Feel free to use them, but please limit yourself to
3 one question, or at least one topic per card, so I can
4 more efficiently sort through them later. Feel free
5 to fill out more than one card. If you would bring
6 your cards to me at the break, I will remain up here
7 and I will address the questions to DOE after the
8 break. DOE staff will answer your questions based on
9 data available to them. They're not in a position to
10 speculate or give personal opinion.

11 I would now like to review the ground
12 rules for this evening's program. These are the same
13 grounds rules I would expect in the classrooms of our
14 school district. First, all will show courtesy and
15 respect to one another. Second, speakers should not
16 be interrupted. Only the moderator gets that
17 privilege. You will notice it is different from what
18 I anticipated.

19 As was mentioned, there is an
20 evaluation form available. I think it is very
21 important you take the time at the conclusion of this
22 meeting to complete this evaluation form. I believe
23 sincere interest in trying to speak to the concerns
24 and interests of the community and DOE, Westinghouse

1 needs your feedback if they are to structure the most
2 functional future meetings. Extra copies of meeting
3 materials are located on the Community Participation
4 table over near the restrooms. I'm sure they put them
5 there because they figured that would be a high
6 traffic area. There is a lot of good information;
7 much of which is going to be reviewed through the
8 question and answer session. I think it is important
9 that you take advantage of the opportunity to acquire
10 as much print information as possible this evening to
11 take home with you so that you can further study and
12 digest the information available. Should an issue
13 come up that you would like further information about,
14 there are also comment cards that can be found on that
15 table. State your concern and be sure to include your
16 name and address if you want a written response. As
17 stated, responses will be provided within 30 days.

18 I would now like to provide you some
19 background on our speakers, and I would ask each of
20 them to stand as I review his background information.
21 Andy Avel has a Bachelor's degree in geology from the
22 University of Tennessee. He has been with DOE for the
23 past seven years and is currently responsible for the
24 RI/FS work being performed at FMPC. He will explain

1 the cleanup process overall.

2 John Frazier, a PhD, is working for the
3 IT Corporation, as a senior radiological scientist.
4 He is the manager of the Risk Assessment Task Force
5 for the RI/FS being done at FMPC and has been on the
6 project since it began. He will explain how health
7 risks are calculated.

8 Steve Shirley is an experienced project
9 engineer, project manager with Westinghouse. He has
10 been with the project since it started. He is
11 currently the Removal Remediation Action Program
12 Manager working for WMCO. He will discuss near term
13 cleanup efforts known as removal actions.

14 Joe Yeasted, with the IT Corporation,
15 has a PhD in civil engineering in water resources. He
16 is Technical Director of RI/FS. He has been working
17 on the RI/FS from the beginning, and he is going to
18 update us on the Feasibility Study.

19 Bob Galbraith has a Master's degree in
20 geology from the University of Cincinnati. He has 21
21 years of experience as a geologist and also works for
22 the IT Corporation. He is the Technical Manager of
23 the Remedial Investigation and will be bringing us up
24 to date on that project.

1 Before I turn over the agenda to Andy
2 Avel, I would also like to introduce our panelists.
3 They are as follows: Catherine McCord, who oversees
4 the RI/FS for the US Environmental Protection Agency;
5 Graham Mitchell, who oversees the RI/FS for the Ohio
6 EPA, and he has also attended our community meetings
7 in the past. New at this meeting is Bob Owen, who is
8 following the RI/FS for the Ohio Department of Health.
9 They will join Andy Avel on the panel later this
10 evening.

11 I'll now turn over the microphone to
12 Andy Avel, Department of Energy, and he will give us
13 an overview of the cleanup process and also introduce
14 the technical speakers. Andy.

15 MR. AVEL: Thank you, Jim. I'd like
16 also to thank everybody for their participation, for
17 coming out tonight. As Ray has said, I'm with the
18 Department of Energy from the Oakridge operation
19 office, and I have been working on cleaning up sites
20 for the past four and a half years out in St. Louis.

21 I'm new at wearing glasses, it's
22 amazing the reflection you get from the lights with
23 these things.

24 One thing I'd like to restate that Ray

1 has stated earlier, the DOE is committed to cleaning
2 up the site. And that commitment is demonstrated I
3 think very clearly by the restructuring of the site
4 office. The position that Jim Reafsmayder formerly
5 held has been elevated up one level; it's now a senior
6 management position, and that means that DOE will be
7 recruiting government allotment to fill that position.
8 It's not at all suggestive that things have not been
9 done accurately in the past. It's just that the
10 department sees a need now to elevate the level of
11 management at this time, and I think that's good news
12 for you.

13 We're also expanding the site from 9
14 people to 19 and that of those 19 people in there is
15 included an Environmental Manager, Bobby Davis, whose
16 sole responsibility is to follow and manage the
17 cleanup process and all the environmental issues at
18 the site, and that position has been established at a
19 senior management level.

20 What I'd like to talk to you tonight
21 about is the Superfund Process, known as the CERCLA
22 Process, and maybe later on the panel, I can get one
23 of the EPA folks to tell you what the acronym CERCLA
24 stands for. It's a little bit complicated. The

1 Superfund Process was developed to assure that there's
2 a logical approach that is followed for doing the
3 cleanup at the site, that EPA and the state and also
4 that the community is involved in the process, that
5 they are involved in the decision making, the EPA and
6 the state have a technical oversight role. The
7 community has the opportunity to review, to comment on
8 documents. The state and EPA are your agents to
9 insure that the department adequately responds to your
10 comments.

11 These meetings that are also required
12 by the Superfund law is also very heavily endorsed by
13 the DOE, are another mechanism for you to contribute
14 your concerns and your comments by asking questions,
15 by filling out comment cards. We respond to those
16 comments, and again EPA and the state are here to see
17 to it that the responses you get are accurate.

18 Turning to the process now. The
19 process begins with the scoping of the problem and the
20 planning of the approach. Now, that requires that
21 whoever, in this case DOE, is doing the cleanup stands
22 back, looks at the problem, and looks at various ways
23 to go about solving the problems and comes up with a
24 solution. Now what the department has come up with at

1 this site is an approach that includes splitting the
2 site up into six what are called operable units or six
3 divisions. The six divisions are on this easel here,
4 and I'm not going to take the time to read them off,
5 you can see them. There's also some posters in the
6 back that explain in more detail what facilities on
7 the site are included in all operable units. But that
8 helps the department be able to manage more
9 efficiently those cleanup activities at the site.

10 Once the scoping and planning is done,
11 that results in the work plan. The work plan is made
12 available and is available in public reading rooms.
13 Once that step is done, the Remedial Investigation
14 takes place, and what that consists of is taking a
15 look at historic records, doing literary searches,
16 finding out data or information that already exists at
17 the site, some of the geology, some of the ecology,
18 the weather, is all examined carefully and
19 consolidated to support the continued investigation.

20 Another part of that is the site
21 characterization observation. The department goes out,
22 the manager of the process goes out and drills holes
23 to determine what the geology has to establish, ground
24 water levels, basically to determine what kinds of

1 contaminants and the extent of those contaminants are
2 present at the site.

3 Now we have a lot of site
4 characterization going on at the site, and Bob
5 Galbraith is going to come up and give us an update of
6 where we are and specifically what we've done since
7 the last meeting. So Bob.

8 MR. GALBRAITH: What I'm going to talk
9 about is the Remedial Investigation part of the RI/FS.
10 That's the first half of the RI/FS, the Remedial
11 Investigation, in which we try to determine the nature
12 of the problem, the nature of the geology, where the
13 problem is located, and learn how things are moving
14 through the natural systems and figure out where the
15 sources are for the problems we see.

16 In previous meetings we've talked about
17 the area of the surface radiation surveys, and if I
18 get this other slide to work, I'll show you some of
19 these and this beam is going to work. We're going to
20 talk about this whole area here, which is the center
21 of the FMPC right here, and Ross sits up in this area.
22 This is an aerial photograph that has about a five-mile
23 radius to it. Ross sits up here, the Great Miami
24 River is coming down around this way, here's New

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1 Baltimore down here, Shandon sits up in this area, and
2 the Dry Fork and Whitewater River is over here on this
3 side.

4 In the area that we were looking at in
5 the Remedial Investigation, we know the ground water
6 flow comes from the area upriver up to Hamilton and
7 down this way in the aquifer, and you can see all
8 these light colored areas in this photograph are the
9 flat plowed fields in the flood plane and in the
10 valley fill of this very channel aquifer we have. The
11 dark area such as here and on the east, down here on
12 the south and over on the west are areas of bedrock.
13 These are areas where there's virtually no ground
14 water and the main aquifer we're looking at is in this
15 vally right here. From Ross the water flows down the
16 valley and pretty much follows the course of the Great
17 Miami River through New Baltimore and down this way.
18 From over on the east side the Whitewater River is
19 recharging water to the aquifer and flow in the
20 northern area is across the FMPC and again down along
21 the Great Miami River, and the southern part of the
22 channel out here, the flow comes over this way and
23 makes a turn and goes down through this narrow channel
24 in the aquifer and flows this way.

1 So the areas I'll talk about tonight
2 are the investigation in the FMPC and some of the
3 things we've shown you in the past, and then I'll talk
4 about some of the investigation work that's going on
5 in this cross hatched area down here, which is the
6 area which we're calling the South Plume. That's
7 where we have uranium contamination off-site. This
8 map is available in the back of the room. You can
9 look at it after the meeting. Many of you looked at
10 it before the meeting. If you can't quite make out
11 all the details, take the opportunity at the break to
12 come look at it more closely.

13 In the past we've talked about surface
14 radiation surveys which were conducted right around
15 the main part of the production area and the waste in
16 the areas circled by the little red dots. We also
17 talked about surface soil sampling, which has gone on
18 over most of the FMPC, and we also talked about
19 monitoring well data, the well that we installed on
20 the FMPC and off site around it on all sides. In
21 those presentations we presented both ground water
22 data which talks about the different directions ground
23 water is flowing and total uranium maps. We have
24 shown you that in the aquifer total uranium does exist

1 under the waste pit area, and then is present in the
2 ground water system along the length of Paddy's Run
3 with higher levels down here in what's call the South
4 Plume, the area just to the south boundary of the FMPC.

5 Right now our current activities are to
6 evaluate the data we've collected so far. We are
7 looking at where are the data gaps and where do we
8 still need some more information to tie the loose ends
9 together. So we're asking these kinds of questions,
10 where are the data gaps, what is needed to complete
11 the investigation because we want to get the
12 investigation part of the RI/FS completed so the
13 people doing the feasibility study have a good basis
14 on which to make their decisions. Right now these
15 questions are being dealt with, we're recommending
16 more wells and we're recommending more sample
17 locations. The main activities are with the silos,
18 the production and suspect areas, and then the South
19 Plume.

20 The K-65 silos are located on the west
21 side of the FMPC. It's hard not to be nervous this
22 distance.

23 (Laughter.)

24 In the south side of the FMPC, and what

1 we're looking at is we're going to sample the berms,
2 the dirt that is actually piled up around the two K-65
3 silos to make sure we understand whether or not there
4 has been any leakage into that material from the silos.
5 We're also planning on drilling some horizontal
6 borings underneath the silos to sample the soils that
7 are actually underneath the silos. We will stand off
8 on the west side of the silos on a little low place
9 next to them and actually drill horizontal holes
10 underneath those, and this work is planned to begin in
11 early November.

12 In the suspect areas are areas on the
13 FMPC which there's a suspicion that some activities
14 might have gone on early in the history of the site
15 that may have resulted in some environmental
16 degradation, and the two main areas we're looking at
17 are the south field, which is right in this area, and
18 then the fire training area up on the north side of
19 the area. The south field is an area where there were
20 possibly some materials buried in early days of the
21 FMPC. We know there's a lot of construction rubble
22 buried out in there, and the question is whether or
23 not there's any radioactive materials associated with
24 that.

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1 In the fire training area, it's an area
2 where fires were started in containers and control
3 ponds so that firemen could practice putting them out.
4 It's best to have some practice before you get out to
5 the real burning house, but in the process of doing
6 that, they could have spilled oils and some of the
7 materials they used for the fire training, so this is
8 the kind of thing we're looking at. There are a few
9 other small areas scattered around the FMPC we will
10 also be investigating.

11 The production area is an area there's
12 been a lot of interest in the past. We have installed
13 180 borings out of a 250 boring program, and many of
14 those borings have been completed as piezometers or a
15 small diameter monitor well. In the case where we
16 drill a boring -- first, they are upwards of 20 feet
17 deep. We are trying to stay in the till, in the clay
18 like material that is underneath the main part of the
19 production area up here. It is not part of the
20 aquifer underneath. We're drilling holes down to 20
21 feet and we're analyzing up to six soil samples from
22 each of those borings, and the samples are distributed
23 over the depth of the boring.

24 More of the samples are taken near the

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1 surface than near the bottom, so we try to get a
2 feeling for how much uranium has penetrated down
3 through the soil, if any at all. If we find water in
4 the course of making this boring, drilling a hole for
5 the boring, then we install a small diameter, each of
6 those two-inch wells, and we're calling those
7 piezometers so that people don't get confused between
8 them and the regular monitor wells we have installed.
9 With these wells we can check water levels within the
10 production area here and we can also identify water
11 quality and get a feeling for whether or not there's
12 been some contamination in the site.

13 And this map is I'm sure a little hard
14 for you to see the background detail, but generally
15 you get a feeling for the number of borings we have
16 installed. This is 180 borings, and the red dots,
17 like this one, are where we have installed piezometers;
18 the brown dots like this one are the ones that are the
19 dry borings where we don't have ground water. So part
20 of our analysis now is to look at the areas where
21 there's very little ground water, like this area here,
22 and compare it to areas where there's quite a bit of
23 ground water and also look at the water chemistry in
24 these areas and see which way things might be

1 migrating and how much material there might be present
2 in the subsurface.

3 Right now areas that people have heard
4 about before is the South end of plant six, there is
5 some uranium in the ground in that area, in the area
6 here under the central part of plant six where the
7 collection has been going on.

8 Steve Shirley is going to talk about
9 the removal actions that are going to be conducted in
10 here. The other area in the plant is south of Plant
11 2/3. This is where most of the materials were
12 digested of the plant, so this is where uranium in its
13 gas soluble form were seen, some contamination in this
14 area south of the Plant 2/3. All this contamination
15 is in the till, is not in the sand and gravel aquifer
16 underneath. We have a number of monitor wells in here
17 and here, which confirm that we're not getting any
18 leakage here. We have some minor amounts of uranium
19 in wells adjacent to Plant 6 there. So we are
20 watching both the near surface material and are trying
21 to get that quickly and we're watching the deeper
22 aquifer.

23 The South Plume is another area that
24 we've been pursuing. The last public meeting we had,

1 we told you we had hoped to drill another seven wells
2 in the South Plume area. We have recently gained
3 access to drill five of those wells in the South Plume
4 area. The DOE is working to gain permission from the
5 landowners in that area.

6 Also, there's another Remedial
7 Investigation Feasibility Study being conducted by two
8 companies that are located along Paddy's Run Road in
9 the Fernald area, and we hope to have an agreement
10 signed very shortly with them for sharing data. They
11 are going to install a number of wells in this area
12 and the central part of what is our South Plume study
13 area, and we hope to get data from them as well as
14 they hope to get data from us to support both of our
15 investigations and our understanding of the aquifer
16 system and how contaminants are migrating through the
17 area.

18 This map shows graphically the results
19 of sampling we did back in May, and the blue dots,
20 such as these, and most of these are homeowner wells
21 out here, are at levels where the uranium is a
22 background concentration of one microgram per liter or
23 one part per billion or less. You see just the south
24 end of the South Plume up here. Willey Road is going

1 just off the edge of the screen here. Highway 128
2 comes down here; New Haven Road comes across here.
3 Highway 128 comes all the way down here; the Great
4 Miami River over there. Again, this diagram is in the
5 back of the room if you want to look at it more
6 closely and study it more carefully.

7 Our current modeling of the aquifer,
8 and we have a very sophisticated ground water model
9 that we developed, predicts that this main part of the
10 Plume, and this was the material that was in place
11 probably in the '50's and '60's when there was a high
12 level of run-off of uranium bearing water from the
13 surface of the FMPC, is probably traveling down a path
14 that will take it down towards the intersection of
15 Highway 128 and New Haven Road. We're proposing wells
16 and looking at data from wells in the Paddy's Run area
17 to confirm that model prediction.

18 We also have Paddy's Run, which still
19 runs down here and there's flow seasonally in Paddy's
20 Run, and so we're still getting some infiltration of
21 water along here, and we got a surprise last spring
22 when this well showed up down here with 37 micrograms
23 per liter of uranium. The proposed drinking water
24 standard is 33 micrograms, so there's not much

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1 difference than that, and this is far removed from
2 where we think the main plume is over in here. We
3 think right now that this is somehow related to flow
4 in Paddy's Run and remobilization of material that is
5 in the soil underneath the surface, and we're
6 continuing our sampling and we're evaluating what we
7 can do in addition to look at this whole length of
8 Paddy's Run to evaluate this. Subsequent samples were
9 6 and 14 microparts per billion in about two month
10 intervals from that site.

11 So that's pretty much where we are. As
12 you can see, the new member is going to be very busy.
13 We're starting a number of new sampling programs and
14 we're continuing to work in the production area. Our
15 present plans and goals are to complete all the field
16 work by this spring of 1990. That doesn't mean all
17 the data sampling or data gathering will stop.
18 Westinghouse will have an ongoing environmental
19 monitoring program which will incorporate many of the
20 wells which we installed for the RI/FS to keep track
21 of data, to keep track of changes with time and help
22 us develop a better understanding of what's going on
23 in the environment. Thank you.

24 MR. AVEL: Thank you, Bob. Let me

28

1 again remind you that the drawings that Bob used are
2 available at the back of the room, and following the
3 question and answer period, Bob himself will be back
4 there and several other technical folks will be back
5 there to answer any questions you might have.

6 In summing up what Bob has told us,
7 since the May meeting we've drilled 180 holes in the
8 production area to analyze for uranium and determine
9 presence of water, and also we have gained access to
10 property in the South Plume area that is allowing us
11 to install five wells, one of which we're drilling
12 right now. And then again, an important factor, as
13 Bob pointed out, is that we plan to be complete with
14 the RI field work in the spring of 1990.

15 There's another portion of the Remedial
16 Investigation that's very important, and that is risk
17 assessment. And the risk assessment examines various
18 paths that contaminants can follow to a receptor or to
19 a person and what the highest potential dose or
20 exposure rather to that individual might be. And
21 we're doing again six risk assessments, one for each
22 operable unit, and John Frazier is spearheading that
23 effort, and John is going to come up now and tell us
24 where we stand with the risk assessment.

1 MR. FRAZIER: Thank you, Andy. Good
2 evening. I'll be talking about the risk assessment
3 activities that are under way, explaining the risk
4 assessment process and the current status of the risk
5 assessments for each of the six operable units.

6 The risk assessment process is a
7 integral part of the entire RI/FS process. From the
8 beginning of the project's scoping, we review the work
9 plan, contribute the -- to that we review the
10 preliminary data from which we can determine whether
11 there was the nature and extent of hazards as
12 determined from existing data, and we looked at the
13 remediation goal to see how best the risk assessment
14 can work to evaluate those alternatives.

15 As the Remedial Investigation commenced,
16 the site characterization efforts were resolved in
17 looking at data, reviewing the data for the quality
18 and completeness as it was obtained, and as part of
19 that Remedial Investigation and a very important part
20 of that is the baseline risk assessment, and I'll
21 describe this in greater detail. A very structured
22 process as recommended or guidance provided by the
23 Environmental Protection Agency. But the process will
24 continue and is continuing through the Feasibility

1 Study where we will look at the alternatives and
2 evaluate those alternatives with respect to the
3 applicable, relevant or relevant and appropriate
4 regulations or requirements there.

5 The baseline risk assessment, which is
6 the risk assessment of the Remedial Investigation,
7 consists of the data collection and analysis, followed
8 by the assessment of the exposure, the assessment of
9 any toxicity, chemical toxicity from the materials,
10 and then the characertization of the risk. I'll look
11 at each of these four elements as we go through it now.

12 The data collection and analysis.

13 Looking at the background information, what data do we
14 have about the site, about the conditions at the site,
15 some history of the site as it relates to the risk to
16 individuals off site now. We gather and analyze data
17 for the source term. That's the terminology that's
18 used for the radiological and chemical constituents of
19 materials in each operable unit.

20 We identify then any potential
21 radionuclides and chemicals of concern in each of
22 those operable units. Radionuclides and chemicals of
23 concern would be those that can be transported in
24 sufficient quantities to off site individuals to

1 present a hazard to them, a health risk to them.

2 Then we assemble all the data needed
3 for each step of the exposure calculation. These data
4 include transport parameters through each of the
5 environmental transport pathways, the assembly of that
6 data for the chemical forms of material which are
7 found and subsequently the change in chemical form as
8 it goes through the environment. So the data
9 collection and analysis is the first step.

10 Then we look at the assessment of the
11 exposure. We'll analyze and we are analyzing the
12 contaminant releases, historical records as well as
13 identification of materials that were put in these
14 different operable units or present in the operable
15 units. We identify the potentially exposed outside
16 population, those individuals who could possibly be
17 exposed. We identify the potential exposure pathways,
18 and I will look at greater detail at that in just a
19 few minutes. I could have replaced exposure pathway
20 by transport pathway, because although there's
21 material on the site, you have to get that material to
22 individuals off-site. And then we calculate the
23 concentrations using a transport pathway analysis,
24 calculate the concentrations of the contaminants at

1 potential exposure locations. Wherever possible, we
2 use the measured concentration of contaminants at
3 locations. Because that takes out a lot of of the
4 uncertainties in the calculation.

5 Then we calculate the hypothetical
6 intake for each contaminant, and we assume the maximum
7 exposure conditions. Those are conditions where the
8 individual would have the greatest possible intake
9 under hypothetical conditions in terms of how much of
10 a water they might drink each day of the year or other
11 habits of what food crops would be consumed and the
12 other factors such as what food crops would be or what
13 forage would be taken up by grazing animals and things
14 like that. So the assumed maximum exposure conditions
15 gives us an upper bound on the hypothetical intake.
16 And then for the radioactive materials, we calculate
17 the radiation dosages.

18 Let's take the potential exposure
19 pathways and I can explain that a little bit. We have
20 the regular operable chemical materials in the
21 operable unit. From those we, in order to get an
22 intake by humans or a dose for humans, we have to
23 consider the environmental transport pathways such as
24 the air, the soil, ground water, and the surface water.

1 Transporting that material from this operable unit to
2 an off-site receptor, a person.

3 Now this is simplified. In my
4 preparation for this, I went through an example of
5 what I considered was body exposure pathway, and it
6 has about nine or ten little boxes across there and
7 the people reviewing it said, that may be simple to
8 you, but it's not simplified enough, so I simplified
9 it to satisfy a few other people. One is the direct
10 exposure pathway, which you have for radioactive
11 materials. These are the penetration radiation such
12 as gamma rays, if you will, such as the radiation you
13 would have from the K-65 silos and from perhaps some
14 other areas on the site there. This is radiation that
15 travels at the speed of light, travels in a straight
16 line. It can present a direct external exposure to
17 off site individuals. Depending upon where the
18 individual is, how long they stay there.

19 Another environmental pathway is the
20 food chain pathway. That can include several
21 different steps and a lot of pieces to it, but
22 primarily you're talking about all the pathway to the
23 food chain that would be ingested by off-site
24 individuals. And there is possible to have direct

1 ingestion without going along through a food chain
2 such as direct ingestion of soil or sediment. Taking
3 the worst case into account, where you may have the
4 ingestion of non-food substance by individuals, people
5 like to chew on their fingers and eat the dirt off
6 their fingers or something like that.

7 Also we include here the pathway for
8 inhalation of the airborne materials, whether they be
9 directly from the source or whether they are related
10 to the air and maybe settle out and then later be
11 suspended. These are simplified pathways type of
12 analysis that we have to an off-site individual.

13 Now, let me give you an example of the
14 application that has been done of these pathways
15 analysis for operable unit 4, which includes the
16 K-65 silos. We have radiological constituents in the
17 silos, which is constituents of greatest concern as
18 the Radium 226, which decays to Radon 222, which has
19 further decay, and if we look at the pathways to
20 off-site individuals from this operable unit, the
21 pathway which has been identified to date is the
22 direct radiation pathway, external exposure. The air
23 pathway of the radon and the radon daughter products
24 to off-site individuals.

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1 Some numbers. Applying this pathway
2 analysis calculated the radiation dosage from the
3 pathways and these are the only pathways that have
4 been identified to date. I'll talk a little bit about,
5 as already mentioned, some of the measurements that
6 will be ongoing to better quantify other potential
7 pathways to see if other pathways do exist for this
8 operable unit, but for the direct radiation, the
9 measured annual exposure rate, this is 47 mrem, which
10 is a unit of radiation dosage equivalent per year at
11 the property boundary at the fence line, the closest
12 part of the fence line that's due sort of west,
13 southwest in that general area, mostly west I think
14 because of the closeness you get there. This assumes
15 that an individual were at that boundary 24 hours a
16 day, 365 days a year, out of doors with no protection
17 by building, home, or anything like that. We consider
18 this a maximum exposure condition for that situation.
19 And looking at that 47 mrem, we can see that that
20 compares to natural background radiation dose
21 excluding the radon of a hundred mrem per year. So
22 it's natural background from the external and internal
23 sources would be this much, and this is less than that.
24 This is as measured at the site boundary. As you go

1 further from the site boundary and as you have
2 protection from structures and other things like that,
3 this is greatly reduced.

4 The air pathway by inhalation of radon
5 daughter products comes out to a different unit of .3
6 what's called working level months per year. This is
7 the unit that is recommended by the EPA for describing,
8 quantifying the radon daughter or radon daughter
9 products exposures. Now, the natural background
10 exposed to radon daughter products, if you were to
11 take an average, is about .13 working level months per
12 year. This is assumed out of doors there. There's a
13 real variation in this number and I hesitated putting
14 it up, but I felt I used -- I needed to describe the
15 method by which I calculated this and it's calculated
16 in a similar fashion for the measured radon levels
17 what you would get for the radon daughter products.
18 So this is above that calculated background. As we
19 know, there are tremendous variation in the United
20 States of the radon daughter product exposures.

21 Another example of a pathways analysis
22 is for the South Plume, where we have the radiological
23 constituents of the South Plume, that being uranium,
24 and that is also the chemical constituent in the South

1 Plume. No other radionuclides have been determined to
2 be above background and no chemicals other than
3 uranium have been determined to be above background in
4 that South Plume off site. The pathway that I'm using
5 for this example is the ingestion pathway to the
6 off-site individual.

7 And the numbers, if I assumed that the
8 individual is drinking two liters of water per day,
9 365 days per year, water with a concentration of, this
10 is 200 picocuries per liter, and people criticize
11 saying I should put this in parts per billion, but
12 this would be 300 parts per billion of uranium, and
13 this is the highest measured off-site concentration in
14 a well from a well; then the calculated dose to an
15 individual is 37 mrem. Once again, I need to put it
16 in prospective. Of this 37 mrem from an ingestion of
17 this water, that would be the total dose, total
18 radiation dose received from the intake over 50 years.
19 If we were to just consider the dose over the first
20 year after that intake, it would be about 12 mrem.

21 Now, this compares to a natural
22 background radiation dose from all sources, including
23 the radon and everything else after background
24 reported by the National Council on Radiation

1 Protection of approximately 300 mrem per year for an
2 individual in the United States. If we were to add up
3 all 50 years of natural background, we would see that
4 it's 15,000 mrem from natural background sources as
5 compared to the 37 mrem.

6 We also looked at, and I won't get into
7 it for this presentation, but we looked at numerous
8 other pathways for potential ingestion from the South
9 Plume, and that would include food crops, irrigation
10 of food crops and the irrigation on the crops and
11 taken up by the crops, but for the purpose of an
12 example I used this ingestion of the water itself.

13 Continuing with this we see the
14 parallel to the exposure assessments. We have the
15 assessment of the chemical toxicity for any materials
16 that have been identified where we gather and analyze
17 the chemical toxicity information, and then we
18 determine the toxicity reference values. Those values
19 above which toxic effects could be observed.

20 And then finally we characterize the
21 risk from the exposure. We review the toxicity and
22 exposure assessments. We calculate the radiological
23 risk for getting cancer, and then we calculate the
24 health risks from the chemical exposures. The very

1 structured process following the guidance and
2 parameters presented by the EPA.

3 The baseline risk assessment report is
4 then prepared for each off the operable units. It is
5 an integral part of the remedial investigation. It
6 follows the EPA guidelines, as I mentioned, and it
7 describes the risks, the health risks to off-site
8 individuals as though no cleanup actions were taken.
9 In other words, the no action alternative for the
10 baseline condition. This is the condition that is
11 used for comparison for the alternative assessment
12 under the Feasibility Study.

13 The status, some activities have been
14 performed on all of the operable units. The formal
15 risk assessment process, the baseline risk assessment
16 process is really what I reckoned here in terms of
17 this status, but some activities have been done on all
18 of them. For the waste pits, data collection and
19 analysis is in progress. For the solid waste units,
20 again that is also in progress. For the production
21 area and the soil and water environmental media, it
22 says the assessment schedule begins after the first of
23 the year, but much of the data regarding the transport
24 pathways has already been assembled and we're filling

1 in those data gaps that Bob Galbraith mentioned here,
2 but much of those data have already been reviewed for
3 transporting off-site. The silos, if you include the
4 K-65 silos, the preliminary baseline risk assessment
5 report is being written and actually is undergoing
6 internal review. The South Plume is in similar status.

7 Now the conclusions, the baseline risk
8 assessments are proceeding on schedule. Of the six
9 operable units the two that have been done first were
10 the ones that were thought to have the largest
11 contributions of off-site doses, and indeed from the
12 preliminary assessment of all the others that shows to
13 be the case, that the K-65 silos and the South Plume
14 shows the greatest potential contributors to off-site
15 doses. The Risk Assessment Team is participating in
16 remedial alternatives selection, and finally, although
17 there's large quantities of materials on the site,
18 radioactive materials, and there have been potential
19 and conjectured releases over the years, in terms of
20 the pathways to man now, none of the six operable
21 units has been found to present an imminent and
22 substantial hazard to off-site populations. There are
23 dosages that can be calculated to be above background
24 doses, but they are not considered to be in the

1 potential hazard to off-site populations.

2 With that I'll hand it back over to
3 Andy.

4 MR. AVEL: Thanks, John. Well, the
5 Remedial Investigation now, I think we've learned that
6 it tells us what contaminants are on the site. It
7 also tells us the boundary that these contaminants
8 inhabit, and also via the risk assessments, it tells
9 us how they effect us, how they can potentially affect
10 our health, and again I would like to remind you that
11 John will be available after the question and answer
12 session and during the question and answer session to
13 answer any of the questions that you might have. Some
14 of the information that he's given you is, to me is
15 good news and if I were you, I'd want to make sure
16 that the department really knows what it's doing and
17 is going about this risk assessment correctly and the
18 department is here and is ready to respond to your
19 questions to show you in as much detail as you would
20 like to see, how we develop the risk assessments, how
21 we do the site characterization, how we were
22 developing any of these reports here. Again John, Bob,
23 myself, all the people you'll hear from tonight will
24 be available during the question and answer session

1 and after at the poster session.

2 Once the risk assessment is complete,
3 we move into what is called the Feasibility Study.
4 Now the Feasibility Study takes a number of potential
5 processes that we might use to cleanup the problem
6 that has been identified in the Remedial Investigation.
7 We evaluate each one of the alternatives is what
8 they're called. We evaluate those alternatives to
9 cleanup and we go through a very rigorous process to
10 determine which one is the most preferred alternative.
11 A lot of things are taken into consideration to make
12 that determination, and again you play an important
13 part in making that determination, as does the EPA and
14 the state. We are doing work and in the Feasibility
15 Study area on the site, and Mr. Joe Yeasted is going
16 to follow me with a presentation on what's happening
17 with the Feasibility Study. Joe.

18 MR. YEASTED: Good evening. It's a
19 pleasure being with you again tonight. At the last
20 public meeting in May I presented to you a more
21 detailed presentation of what the Feasibility Study
22 process is and what some of the early work that was
23 accomplished was finding.

24 Tonight I would just like to give you a

1 brief update or a brief recall of that just so we're
2 all together in our thinking, and then carry you a
3 step further into what has been completed since the
4 May time frame.

5 As I mentioned at the last meeting, the
6 Feasibility Study process includes three major tasks.
7 The first is the development of alternatives. In this
8 case any alternative that is potentially feasible for
9 a given problem is identified and recognized as a
10 potential candidate. At the second stage there's an
11 initial or interim screening performed in which those
12 alternatives are compared to each other, and only
13 those that are the most feasible and most
14 implementable are carried forward into a detailed
15 analysis. The final step, which is the detailed
16 analysis, is where the very detailed look at those
17 alternatives occur, a comparison among alternatives is
18 carried out, and that's carried out according to nine
19 very specific evaluation criteria that have been
20 developed by the US EPA.

21 Within the feasibility setting process,
22 the formal public input occurs very late in the
23 process. At that point there is a document prepared
24 for public reviewing and comment called a proposed

1 plan. At that point a remedy has been preliminarily
2 selected by the lead agency, but it precedes the
3 formal documentation and decision on that remedy. So
4 even though there's a selection preliminarily made,
5 the formality does not occur until the Record of
6 Decision, and at that point the public is formally
7 involved through a public response on that document.
8 However, it would be of little use to the DOE to wait
9 to that point to receive public input on their
10 strategy development for the site. So what we're
11 trying to do throughout the FS process is to provide
12 for public meetings, such as we're sitting through
13 tonight.

14 It so happens that the sequencing and
15 the timing of the activities, the individual task is
16 such that on each operable unit it will likely be at
17 one of those stages for any given public meeting. So
18 you'll always have an opportunity to respond at each
19 stage for each operable unit, and that input is very
20 helpful to us and not only cause for identifying
21 technical issues that we may have overlooked but just
22 in getting public sensitivity identified and being
23 able to work that in before we get to the selection
24 step.

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1 It also so happens as we stand here
2 tonight, among the six operable units there's an equal
3 distribution of those that are in the developmental
4 stage or just completed that, the screening stage, and
5 the detailed analysis stage. The last public meeting
6 I spent the night talking about those alternatives
7 that were developed for all six operable units. What
8 I'm going to spend most of my time on tonight are the
9 operable units that have entered the detailed analysis
10 stage, mainly because they have now gone through the
11 initial screening, the alternatives have been refined,
12 and that's really the focus of our work right now. It
13 cannot be surprising that the way they are distributed
14 is very similar, in fact identical to Dr. Frazier's
15 presentation of the operable units status from the
16 risk assessment standpoint, where it was distributed
17 three ways.

18 Two of the operable units have gone
19 through the detailed development of alternative stage
20 but no further work has been completed to date. These
21 include operable unit 3, which as the right-hand
22 screen shows, is the production area, and that
23 includes the suspect areas that Mr. Galbraith spoke
24 about earlier where the investigative work is going on.

1 The reason that this has not proceeded further is
2 primarily dictated by the fact that we are still
3 collecting data for the sites. Even though
4 considerable work has been reported, 180 borings as
5 spoken about a minute ago, there is still considerable
6 work to be done, a lot of evaluation still to be
7 completed and, therefore, it makes no sense for us to
8 proceed further into the screening process.

9 Operable unit 5, which is the regional
10 environmental media, primarily the water and soil, and
11 this included not only the ground water throughout the
12 region you've been hearing about tonight, but it also
13 included the Miami River, Paddy's Run that runs down
14 along the western side of the site, the soils
15 throughout the area, and that's not limited to the
16 site itself, but even off-site areas. Each of these
17 regional pictures has not been, has not gone into the
18 screening phase, because to get the best handle on
19 these, not only do we need a full set of data but we
20 also must have some idea of what we're going to do
21 with the source terms for the contaminants that have
22 or could potentially migrate to off-site areas.
23 Therefore, as the other operable units proceed, we'll
24 have a handle on what is to be done, what level of

1 cleanup is to be performed, and this will allow us to
2 establish an appropriate baseline to look at what will
3 have to done with the radial environment to achieve
4 the remediaton objectives.

5 There are also two operable units that
6 are currently in the screening phase. Each of these
7 is progressing and we suspect they will be completed
8 by the next public meeting and we can report on the
9 findings at that time. The first one is the waste
10 pits which are our operable unit 1. This slide shows
11 pit 5 and the recently covered pit 4, and this area in
12 here is part of another pit that has been covered for
13 some time. This operable unit is one of the largest
14 problems at the site from an engineering standpoint.
15 The screening and detailed analysis of this presents
16 one of the major technical challenges, and we are now
17 preceding into that.

18 The other one that is in the screening
19 process is operable unit 2, which we term the solid
20 waste units. This slide does not show all the units,
21 but in particular there are two small ponds right here
22 in which some of the lime sludge that is generated
23 through the water treatment plant at the site is
24 disposed and also back in this corner -- you can't

1 really make it out even if you are standing out at the
2 site today -- is the sanitary landfill that had been
3 developed at the site, just for sanitary and other
4 types of solid waste.

5 Also included in this operable unit
6 south of where we are looking are the fly ash pouch.
7 This is an area where when the fly ash from the boiler
8 plant has been disposed of over the years, and that
9 was the design. The south fill area that Bob
10 Galbraith spoke about earlier that is going to be
11 investigated starting next month is also included in
12 operable unit 2.

13 The distinction between operable units
14 1 and 2 is important. Operable unit 1 includes those
15 units that were planned, designed, and completed as
16 units for storing radioactive waste and waste drains
17 from the site. On the other hand, operable unit 2 we
18 are getting into where they are designed for solid
19 waste, for sanitary waste. There has been some level
20 of contamination of those just because of poor
21 practices in the past, but the bulk of the waste is
22 not radiological or hazardous chemicals. That's an
23 important distinction when you start looking at what
24 may have to be done to remediate those portions of the

1 site, and for that reason we separated them out into
2 two distinct types of units.

3 The last two units, which are operable
4 unit 4, are the K-65 silos, and operable unit 6, the
5 South Plume, have progressed the furthest, and again
6 the reason for this is they represent the greatest
7 off-site risks to the general public. In this case,
8 in both cases in fact, we are about half way through
9 the detailed analysis of alternatives, and again we
10 would expect by the time the next public meeting is
11 held, we will be able to report the results of that to
12 you.

13 It's also interesting to note that as
14 part of the Feasibility Study process under the CERCLA
15 guidelines, there is an allowance for collecting
16 additional data as you see a need during a Feasibility
17 Study. You heard about that tonight from the K-65
18 silos, where in planning both from an engineering and
19 a risk assessment standpoint the cleanup, we found
20 that we needed additional information from below the
21 silos and around the berm. That action is being
22 planned and will be carried out later this fall.

23 There's also a need in most cases for
24 doing treatability studies to confirm that a

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1 technology that is being proposed will work for the
2 specific conditions at the site. In the case of the
3 K-65 silos, a testing plan for treatability studies
4 has been prepared. We feel we know enough now as far
5 as the types of alternatives we're going to be
6 evaluating in the future and we have a proposed plan
7 for testing. Right now we're waiting for materials,
8 actual material from the silos to complete that
9 testing. That program for silo sampling is very close
10 to being completed and we will be receiving that
11 material and beginning the treatability study shortly.

12 For the K-65 silos we have completed
13 the initial screening and what I have shown here are
14 the alternatives that we are carrying forward into
15 detailed evaluation. The no action alternative is
16 always considered to maintain that baseline of
17 comparison for the other alternatives through the
18 process.

19 The next alternative, in-place
20 isolation, includes those technologies in which the
21 silos and the waste will remain as they stand today
22 but some action will be taken external to that to
23 prevent any migration to the environment. In contrast
24 to that is what we call in-place stabilization of

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1 waste. In this case the silos will remain but
2 something will be done with the waste inside to
3 prevent their migration or movement if anything was to
4 happen to the silos. This could include, for example,
5 physical stabilization with concrete just as an
6 example or some type of chemical stabilization that
7 would chemically tie up the waste.

8 The last four alternatives all involve
9 removing the waste from the silos. They are separated
10 by on-site disposal and off-site disposal. On-site
11 disposal would be that after some secondary action was
12 taken on the waste to stabilize them or to treat them,
13 the waste would be stored at the FMPC in an engineered
14 structure that would meet current regulatory
15 guidelines. The other option, off-site disposal,
16 would be to do something with the waste to stabilize
17 it and then take it off-site to a permit approved
18 disposal area.

19 Another distinction between these
20 alternatives are the difference between stabilization
21 and separation. Stabilization would be again where we
22 would take the waste, place it into some receptable
23 and then stabilize it with cement or other chemical
24 stabilizing agent. In contrast to that is chemical

1 separation. In this case we would provide a chemical
2 extraction of, and the target chemical here would be
3 radium, but there would be other things that would be
4 extracted along with the radium, where we would
5 separate that out from the bulk of the weight. And
6 what this does is minimizes the amount of material
7 that we would have to pay special attention to and
8 allows the other material, the bulk of the material to
9 be treated and disposed of in a less restricted way.

10 Another possibility with separation for
11 the K-65 silos just as an aside issue is that it is
12 known that there's a considerable amount of precious
13 metal in there, gold, silver, platinum, et cetera, and
14 if a separation technology is successful, there is a
15 possibility to recover that precious metal in the
16 process. This type of technology is going to require
17 considerable testing before it can be considered
18 acceptable for this site.

19 The final operable unit is the South
20 Plume. Mr. Galbraith mentioned earlier that the South
21 Plume is being projected by numerical models to be
22 shaped like a disc. Again, we have preceded through
23 about half way through the detailed evaluation of
24 alternatives and we are expected to be completed with

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1 that in the near future.

2 Let's again look at the top two boxes
3 in this case. We have additional site
4 characterization being identified, which Mr. Galbraith
5 spoke about. That's going to refine our understanding
6 of the southern portion of the plume, to extend the
7 magnitude and also to investigate whether any other
8 areas should be considered under the South Plume issue.
9 And that's in progress and was mentioned to you
10 earlier that one well is just being put in now and the
11 other four remaining ones will be going in in sequence.

12 There's also a treatability study
13 involving the South Plume. In this case we have
14 already completed it since the May meeting. This
15 study took water right from the South Plume and
16 subjected it in a laboratory setting to various
17 treatment alternatives to remove the uranium. We
18 found through this study that there are technologies
19 available. These technologies have proven successful
20 in other sites. We tested them using our water and
21 our problem in essence and we did find that they were
22 successful in removing uranium for less than 10 parts
23 per billion, which is far below the proposed drinking
24 water standards. So we feel that that information

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1 allows us to go through the detailed analysis of the
2 treatment options with some level of confidence that
3 it would be implementable at this site.

4 Let me now touch on the alternatives
5 that we're looking at for the South Plume. Again
6 these are those that have gone through the initial
7 screening and that are being looked at in detail. The
8 no action is again present. The next option is in
9 essence to try to control the movement of the plume,
10 to let the plume and its contaminants in the ground to
11 try to artificially control where it goes and how fast
12 it moves. The option we're looking at, given the
13 conditions of our aquifer, are to pump water, that is
14 clean water from areas outside the plume, reinject it
15 in a different location, and in essence change the
16 natural setting that we're dealing with.

17 The next option or the next two options
18 is to again pump water, but in this case to pump
19 contaminated water and either discharge it to the
20 surface water without treatment, and the water we're
21 looking at is within the DOE guidelines for doing that,
22 or to provide treatment before discharge. The last
23 two options involve leaving the water in the ground,
24 leaving the contaminants in the ground, but simply

1 provide protection to the user. This would involve
2 either letting the plume go but provide the user with
3 a different water supply, and this could be a well in
4 a different location or some other alternative, or to
5 allow them to pump the water from the plume but treat
6 it before it's used at the user location.

7 Each of these and variations thereof I
8 think cover the full gamut of alternatives for
9 treating ground water in a plume such as we have now.
10 In a detailed evaluation these will be subjected to
11 the nine criteria and a recommended or preferred
12 alternative be identified.

13 As the last slide I would like to try
14 to provide a little bit of a background in the
15 relationship between remedial actions, which are those
16 I'm speaking about that go through the full
17 Feasibility Study, and removal actions which you'll be
18 hearing about in a minute from Mr. Shirley. It's
19 important to note the difference, not only from the
20 vantage point of knowing or being in a position to
21 review the documents, but also to recognize where
22 we're coming from right now in this process and why
23 we're facing some of the complexities we're facing.

24 The top most line of boxes is the FS

1 project. We have the three stages eventually leading
2 to a solution. The bottom line is the removal action
3 process. There's a couple of key differences. In
4 this case there's a document being prepared called an
5 EE/CA, an Engineering Evaluation/Cost Analysis. It's
6 a one-step process rather than the three-step process.
7 It deals with a very specific problem; the remedial
8 action program deals with a general problem.

9 The situation that develops, however,
10 is as removal actions are identified, developed, and
11 selected, the condition in which we're working under
12 the Feasibility Study is changing. If we were to do
13 something that would effect the South Plume, either
14 its extent or its migration pathways or whatever,
15 that's going to change possibly the decision made up
16 here. So what we're trying to do is at the earliest
17 possible point where we feel comfortable that's what
18 lurching or what remedy we are recommending is going
19 to be adopted by the agency, we will then change the
20 baseline up here and continue on with the feasibility
21 study with that changed baseline.

22 The other thing that just happened
23 concurrently with all this is additional data is being
24 collected. The two that we're furthest on, the K-65

1 silos and the South Plume, are exactly the two that
2 we're providing with further investigative work. So
3 again, this could change not only the selection of the
4 removal action or the extent of it, but will also be
5 affecting the baseline up here. So we have a
6 three-pronged situation developing. It would be to
7 everyone's wishes that we could say well, let's
8 collect all the data, let's make sure we know what
9 we're going to do here and then proceed with this.
10 However, the DOE and the EPA both acknowledge we can't
11 wait for that.

12 So what we're trying to do is work
13 these concurrently, trying to minimize risk by
14 maintaining communication among the various studies
15 and whatever, but it does provide some complexity in
16 the process, and some day I may be up here telling you
17 we've got to make a change because of some new data or
18 because of a new decision being made down here. I
19 wanted to point that out so that hopefully in future
20 meetings you'll understand where we're coming from a
21 little bit more.

22 With that I'll close and get back to
23 Andy. Thank you.

24 MR. AVEL: Thank you, Joe. A couple

1 of reminders. Just to let everybody know the copies
2 of all the slides that are used tonight, they will be
3 available at the Community Participation table after
4 the presentations, so if anybody would like to pick
5 them up, I think right there is the Community
6 Participation table.

7 Another reminder that I've been asked
8 to make has to deal with the cards that are on the
9 chairs. We provided these cards both to assist you
10 and in remembering what your questions might be as the
11 speakers proceed and also to assist us, and if you
12 will jot your questions down, then at the break if you
13 could give them to the moderator, Mr. Jim Bischoff,
14 that will allow us time to sort them out and to have
15 the appropriate technical person respond to them. So
16 just a reminder the cards are available both here, and
17 I believe at the back of the room there will be some
18 more if you need them.

19 Now, Joe has talked about the removal
20 action, which is this area of the chart right here.
21 The removal action is a mechanism that is being
22 provided in the Superfund process that allows us to
23 deal with areas that may require more immediate
24 attention. Depending on the level of the action or

1 the intention that's required, one of two types of
2 documents can be produced. One is an Engineering
3 Evaluation/Cost Analysis, which is called an EE/CA, or
4 the other is an action report, depending again on how
5 quickly we need to respond. And some of the removal
6 actions that we'll talk about tonight have both an
7 EE/CA and an action report. I think we have a couple
8 of action reports, at least one that I know of, that's
9 already in the reading room. We do have some removal
10 actions that are ongoing at the site. Mr. Steve
11 Shirley is going to update us on what's been done in
12 those areas, so I'll turn the mike over to you, Steve.

13 MR. SHIRLEY: Good evening. As Andy
14 said, tonight I'd like to take a few minutes to update
15 you on some of the early remediation activities that
16 are currently under way at this facility. In addition
17 to telling you about what we're doing, I will also try
18 to tell you how you can participate in the decision
19 making process.

20 At last May's meeting a similar
21 presentation was given. To refresh your memory,
22 removal actions are near term initiatives which are
23 implemented in accordance with state and federal
24 environmental regulations to address either human

1 health or environmental concerns identified during a
2 Remedial Investigation. Removal actions can simply be
3 thought of as near term cleanups with the remedial
4 action or the final cleanup coming after the
5 conclusion of the Feasibility Study which Joe Yeasted
6 discussed.

7 There are two types of removal actions
8 that we're undertaking at Fernald. The first is what
9 we'll equal a priority removal action. This action is
10 implemented quickly with documentation for the action
11 being prepared in parallel. The second type is a
12 routine removal action. These type of actions allow
13 problems to be addressed quicker than waiting for
14 completion of the feasibility study and issuance of
15 the Record of Decision. These actions require that a
16 decision making document called an Engineering
17 Evaluation/Cost Analysis or EE/CA be prepared, issued
18 for public review, and approved prior to starting the
19 removal. Finally, it's important to understand that
20 all of our removal actions are being designed to be
21 consistent with the proposed final action alternative
22 as portrayed by this graphic.

23 There are five removal actions
24 currently under way at the facility. The first is the

1 control of stormwater run-off from the waste pit area.
2 The second is the K-65 silos. The third is the South
3 Plume pumping removal action. The fourth is pumping
4 of perched water from underneath one of the plant
5 buildings, and the fifth is removal of off-site
6 contaminated soil.

7 The first action I'd like to tell you
8 about today is the control of stormwater run-off from
9 the waste pit area, or as we call it waste pit run-off
10 control. This action is being taken because the
11 remediation team realized the contaminated run-off
12 from the site was flowing into Paddy's Run and
13 possibly adding to the ground water contamination of
14 the south. I hope everybody had an opportunity to see
15 the model back at the Developing Solutions area. If
16 you haven't, I'd like to invite you to take an
17 opportunity at the break to go back and look at it,
18 and I am sure there will be somebody back there that
19 can explain it to you in a little more depth.

20 In addition to preparing this model as
21 part of the detailed engineering which is currently
22 underway, DOE is preparing an EE/CA document for this
23 action. This EE/CA document is scheduled to be placed
24 in the administrative record for your review and

1 comment within the next few months. Be sure to watch
2 the local newspapers or the direct mailing for the
3 public notice of availability. After completion of
4 the engineering design and approval of the EE/CA
5 document, construction will be initiated. It is
6 currently anticipated that construction should be able
7 to begin next spring.

8 The second action I would like to tell
9 you about is the K-65 silos removal action. At last
10 May's meeting you were told of a plan to fill the void
11 space between the residues and the top of the silos
12 with sand. Since that time, samples have been taken
13 from the silos and analyzed, and the analysis raised
14 the concern about the effectiveness of this proposed
15 action. Because the moisture content or wetness of
16 the residue was considerably higher than estimated,
17 the team working on sandfill was concerned that the
18 sand might have sunk into the residue instead of
19 covering it. As a result we had placed the sandfill
20 action on hold.

21 In order to insure that appropriate
22 action is taken, DOE has asked the remediation team
23 and independent experts to take additional sample and
24 to make some additional studies. These studies will

1 include an analysis of the silo's structural integrity
2 by Bechtel National, Inc., and a probabilistic risk
3 assessment which is being prepared by University of
4 Cincinnati. The additional sampling includes both the
5 samples of the residue and samples that have been
6 discussed in earlier presentation from around and
7 beneath the silos, the soil around and beneath the
8 silos. The results of these studies and sampling will
9 be used to determine what removal alternative should
10 be started. This determination will be made through
11 the completion of an EE/CA document, and as I
12 mentioned earlier, your input during the reviewing
13 process of this document is desired. You will be
14 informed of the availability of this document through
15 either future community meetings, public notices, or
16 direct mailings.

17 Next I would like to tell you about the
18 removal action being undertaken to control the South
19 Plume contamination. Earlier Bob Galbraith covered
20 what's been found in the South Plume during his
21 remedial investigation session, and John Frazier
22 covered what effects this contamination might have on
23 you during his risk assessment presentation. I'm
24 going to tell you what DOE is doing under the removal

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1 action.

2 Since we talked last May, the majority
3 of work has focused on the preparation of the EE/CA
4 document. This document, which is currently in
5 internal review and which will be placed in the
6 administrative records in the next few months,
7 identifies five potential removal action alternatives.
8 They are the no action alternative, which we're
9 carrying through; monitoring and institutional control,
10 or as Joe put it, I think what was your wording, Joe,
11 for institutional control use restrictions; providing
12 an alternate water supply; ground water pumping
13 without treatment; and ground water pumping with
14 treatment.

15 Based upon our team's review ranking,
16 and upon some preliminary discussions we've had with
17 both the Ohio Environmental Protection Agency and the
18 US Environmental Protection Agency about these
19 potential alternatives, a design concept has been
20 identified and detailed design has been started. The
21 current design concept incorporates both monitoring
22 and control. It provides alternate water supplies for
23 affected users and pumps and treats the plume water
24 prior to discharge to the river. By starting the

65

1 detail design prior to approval of the EE/CA, we are
2 hopeful that construction can begin on this early next
3 spring.

4 The fourth activity I would like to
5 tell you about is the priority action taken upon a
6 pocket of contaminated perched water from underneath
7 the floor of one of the site process buildings. This
8 water was encountered last year during the
9 construction of a new water treatment system for that
10 building. Since the last meeting, 14 exploratory
11 holes or borings were drilled through the building's
12 floor to map the extent of the contamination. Of the
13 14 holes drilled, only three encountered water.
14 Pumping systems for these three holes have been
15 designed, fabricated, and are being installed. Since
16 the original discovery of the contaminated water in
17 August of 1988, over 35,000 gallons of water have been
18 removed and treated using existing site treatment
19 facilities. A draft report summarizing this action is
20 available for your review in the administrative record.

21 The final action I would like to tell
22 you about is another priority removal action for the
23 removal of off-site contaminated soil, or as we call
24 it, Manhole 180. At the last meeting you were told of

1 an overflow of the site discharge line to the Miami
2 River at Manhole 180. Since that meeting
3 approximately 125 cubic feet of soil have been removed
4 and transported to the FMPC. Prior to removing the
5 soil, target levels which are consistent with nuclear
6 regulatory emission guidance were established.

7 Sampling of the area after the soil
8 removal revealed that contamination readings were
9 lower than -- the remaining contamination readings
10 were lower than the established targets. A draft
11 report which summarizes this action is also available
12 for your review in the administrative record.

13 A couple final things I would like to
14 cover is it's been brought out numerous times this
15 evening that the public is important, public
16 involvement is important. Removal actions are no
17 exception. What we're suggesting that you do so that
18 your input can be filtered into the removal action is
19 to watch the local newspapers for public notices, to
20 attend future community meetings, and to check the
21 FMPC publications for updates, and finally to let DOE
22 know what you think about specific removal actions
23 that we have planned or under way.

24 Finally, in summary, presently the site

1 has five removal actions under way. The future may
2 hold additional removal actions. We'll only know that
3 as Remedial Investigation continues. And the most
4 important part to leave you with is that removal
5 actions are being designed to be as consistent as
6 possible with potential remedial actions identified by
7 the Feasibility Studies. Thank you.

8 MR. AVEL: Thank you, Steve.

9 Just to summarize the process, the
10 scoping and planning which leads to the work plan
11 tells us how we're going to approach cleaning up this
12 site, what approach we're going to take. The next
13 step is then the Remedial Investigation, which tells
14 us what the problem is, what do we have facing us.
15 Following that is the Feasibility Study that tells us
16 what we're going to do. Now we know what the problem
17 is once we finish the Remedial Investigation, the
18 Feasibility Study evaluates the various alternatives
19 and leaves us with a Record of Decision which explains
20 what we're going to do to cleanup the problem or the
21 operable unit in the cases that we've been talking
22 about tonight, and why you chose that preferred
23 alternative.

24 Again, the removal action process is a

1 mechanism to handle problems or contaminants that may
2 need more immediate attention.

3 Once we have the Record of Decision
4 developed, then we can go into detailed design of that
5 preferred alternative. And then how we design that
6 alternative is very important that you participate.
7 We'll be having public meetings at the time and we'll
8 be telling you how a design is progressing and
9 following the design is the construction of the
10 remedial action. The remedial action may also include
11 the design; that remedial action may also include some
12 long-term monitoring to measure the effect of the
13 preferred alternative.

14 A couple of points that I'd like to
15 make are that a very significant role in this process
16 is played by the US EPA and the State of Ohio, who
17 have representatives here tonight. They are here to
18 make sure that the Department of Energy does the
19 proper job, that we respond to your comments, that
20 those things that we do do, the work that we do in
21 these documents is technically accurate, and that we
22 are communicating what we're doing to the general
23 public.

24 Also the community participation is

1 extremely important. You have the responsibility as
2 members of this community to make sure the Department
3 is acting responsibly and is providing you with the
4 best cleanup, the best remedies of the problem at this
5 site that we possibly can, and this whole process is
6 designed for all these things to work together to
7 produce a final remedial action which will result in a
8 clean site.

9 Another, just another illustration of
10 our commitment to clean this site up, the Department
11 is planning to spend over 70 million dollars on
12 cleanup activity at this site in 1990, and this
13 represents over half of our budget for 1990, and it is
14 also an increase over last year. In pursuing this
15 cleanup, we're going to be again following this
16 process and the process is a tried process. It is
17 somewhat new but there are still sites and programs
18 that have gone well into the process. DOE feels it is
19 a good process to follow. It's a good way to proceed
20 with the cleanup, and DOE is committed to make this
21 work.

22 I'd like to thank you for the
23 opportunity to meet with you tonight and to talk to
24 you. Remind you again the technical speakers will be

1 available both in a question and answer session and
2 will be here until the last person decides they want
3 to leave tonight. With that, I'd like to turn the
4 meeting back over to the moderator, Mr. Bischoff, and
5 thank you again.

6 MR. BISCHOFF: Thank you, Andy. Just
7 several quick reminders before we go into a ten-minute
8 break. Number one, please pick up a meeting
9 evaluation form. Also copies of the slides are
10 available. You have the opportunity as well to sign
11 up to be added to the RI/FS mailing list; I would
12 encourage you to do so. Also pick up and fill in a
13 community card if you require additional information.

14 A last reminder is if you have written
15 questions, I'll be up here at the table, please bring
16 them up to us at the break. It is now 9:02. We will
17 try and move things along and be back at 9:10. Thank
18 you.

19 (Brief recess.)

20 MR. BISCHOFF: I would like to begin
21 the question and answer session. First, both
22 Catherine McCord from the US EPA and Graham Mitchell
23 from the Ohio EPA would like to make some brief
24 comments. Catherine.

1 Again, one of the ground rules, one
2 person speaks at a time. If you're getting some
3 drinks or cookies, please munch quietly so that we
4 don't interrupt the speakers. Thank you.

5 MS. McCORD: Good evening. Again, my
6 name is Catherine McCord. I'm the Remedial Process
7 Manager from the United States Environmental
8 Protection Agency, Region 5 office out of Chicago.
9 I'd like to just speak briefly about -- update you on
10 a few things that have happened from the EPA's
11 prospective since our last public meeting in May.

12 Last May I talked about the
13 possibility of the Fernald site being listed on the
14 National Priority List, which is the Superfund list of
15 sites that need to be cleaned up. Last July, the
16 Fernald site was proposed for the National Priorities
17 List, the Superfund cleanup list. There was a 60 day
18 public comment period, and that public comment period
19 is over. And there were no significant comments
20 received on whether or not this should or should not
21 go on the list. The EPA is moving ahead towards
22 finalizing the site on the National Priorities List,
23 and we would expect something to be published
24 officially in the near future.

1 As far as the cleanup, that listing on
2 the NPL does not necessarily really change things from
3 a technical standpoint. We've already -- the
4 investigation is well under way. We expect to
5 continue that process.

6 One thing for the community that that
7 listing may affect is that there is a provision in
8 the Superfund amendments, SARA, that allows for
9 technical assistance grants once a site is final on
10 the National Priorities List. So if a citizens group
11 is interested, FRESH or any other organizations
12 interested in applying to US EPA for some monies to
13 get technical assistance, they are welcome to.

14 Another item that I discussed last May
15 was negotiations that were going on between the US EPA
16 and US DOE regarding a new cleanup agreement.
17 Unfortunately, we have made very little progress in
18 those negotiations, and the driving force behind the
19 cleanup and the investigation is still in 1986
20 enforcement agreement between our two agencies.

21 Again, we're trying to update that
22 agreement and enter into a new agreement under Section
23 106 of SARA, or Superfund, and also Section 120, which
24 is a special provision of the Superfund law which

1 deals specifically with federal facilities.

2 There are many new provisions in this
3 agreement that we have not been able to settle the
4 details on. And probably the big changes between the
5 old 1986 agreement and our prompted new one are that
6 there are provisions for some extensions to the
7 Remedial Investigation Feasibility Study. Those dates
8 have not been, again, finalized between EPA and DOE.

9 There are also provisions for the
10 removal actions which were not covered by the 1986
11 agreement. There are also several other provisions
12 that have to do with enforcement of the agreement.
13 We've essentially allowed -- or lifting language out
14 of the 1986 agreement and moving that into our new
15 proposed agreement that will allow enforcement of the
16 agreement by the citizens, citizen lawsuits, or the
17 State of Ohio.

18 We have still got a lot of work to do
19 out at Fernald site as far as the investigation and
20 finding out how much contamination is out there. We
21 hopefully will be able to get some of these removal
22 actions on-line hopefully in the near future.

23 Again I encourage your participation in
24 this process by any formal comments that you've got to

1 the administrative record, and your participation at
2 these meetings. We'd expect that the next meeting
3 will be sometime, I assume, early next year.

4 And I think that's really all I have to
5 say. And again, unless you have any questions -- do
6 you want me to take anything right now, or would you
7 rather wait until later? Okay, great.

8 MR. BISCHOFF: Graham Mitchell, Ohio
9 EPA.

10 MR. MITCHELL: I'm Graham Mitchell
11 from Ohio EPA. And as I stated earlier, it's Ohio
12 EPA's goal to see the site cleaned up. We're here
13 tonight to hear your concerns. With me tonight I want
14 to introduce two people; Rich Bendula, who is the head
15 of our ground water section who has been very active
16 on this site. And also Mike Starkey, who is the head
17 of our corrective action, or Superfund section in the
18 Southwest District. Mike has put a lot of time in on
19 this site. The other thing that Mike is the site
20 coordinator for the Paddy's Run Road site. So that's
21 already been brought up tonight as an issue, and kind
22 of an enjoined site to the DOE site. So it is
23 certainly going to be a player in the future of the
24 clean up of this site. I may refer questions to Mike

1 and Rich throughout the evening. Thank you.

2 MR. BISCHOFF: What I'm trying to do
3 is group questions to the respective presenters, so
4 maybe we can follow through with a theme or related
5 themes as we move through this.

6 First we go to Dr. Frazier. When it is
7 mentioned that said some of the operable units have
8 been found to present an imminent and substantial
9 hazard to off-site populations, what is meant by
10 imminent and substantial?

11 MR. FRAZIER: If I were making that a
12 question, I think I would have done that one so I'm
13 not surprised that's one of the first ones. In the
14 terminology of radiation exposure, an imminent and
15 substantial hazard, which I did not say was from any
16 of the operable units currently existing, would be
17 that hazard to health effects from radiation exposure
18 through the pathways from materials from that operable
19 unit to man, and which would contribute a dose above
20 the accepted dose limit for off-site populations from
21 this, and we have not determined for any individual
22 off-site that there is a dose by them that would
23 exceed that accepted radiation dose for off-site
24 general population.

1 MR. BISCHOFF: A follow up to that
2 which seems to be appropriate, in the risk assessment
3 for the South Plume, why was the maximum exposure to
4 uranium to off-site population from ingestion of water
5 compared to natural background from all sources?
6 There seems to be the concern that you are looking at
7 an isolated example, and yet that coupled with
8 alternate background could be a problem.

9 MR. FRAZIER: That's a good question.
10 I was trying to relate it to some dose limit because
11 even when you talk about it related to dose mrem you
12 need to put it in some sort of prospective, and that's
13 the reason I was doing that, putting it in a
14 prospective of what the natural background doses are.
15 I could have used perhaps some other source of
16 exposure that we might receive from other sources in
17 our lifestyles. If we consider the proposed limit,
18 the 50-year community effective dose proposed limit
19 for drinking water, they recommend a four mrem 50-year
20 community effective dose equivalent and that 37, or
21 the number I recall was 37, does exceed that. That
22 does not apply, though, that's an EPA proposed limit.
23 That does not apply to the uranium, though. Uranium
24 and radon are specifically excluded from that. That's

1 another number that you could use to put that dose in
2 prospective, but they specifically exclude the uranium
3 and radon in drinking water from that.

4 MR. BISCHOFF: Related to ingestion,
5 what is the most common direction of the air movement
6 from the Fernald plant and how far away can you live
7 and still ingest the contamination from the air?

8 MR. FRAZIER: That's for me?

9 MR. BISCHOFF: Someone wrote your name
10 on it. They felt you were the best source.

11 MR. FRAZIER: Prevailing winds in this
12 area are from the southwest, so the northeast is the
13 prevailing wind direction. That is also substantiated
14 by the measured concentrations of uranium in the soil.
15 That would be an indicator of past airborne releases,
16 and the northeast quadrant of the plant does have the
17 higher uranium concentrations in soil and even
18 off-site that is where you find the highest off-site
19 concentration of uranium in the northeast. It does
20 decrease very rapidly from the site boundary as you go
21 out and that information was presented at the, I think
22 it was the January 31st public meeting when we had the
23 plots of the actual soil measurement data, which is a
24 good indicator of past airborne releases.

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1 MR. BISCHOFF: In light of recent
2 natural disasters in other parts of the country, how
3 do your various studies evaluate and rank the
4 potential risk to plant facilities, waste pits, silos,
5 et cetera, from such natural threats as tornadoes and
6 earthquakes?

7 MR. FRAZIER: We have not performed
8 such a ranking of that. The failure of facilities and
9 the evaluation of the potential failure of such
10 facility is a part of a probabilistic risk assessment,
11 and such an assessment is being performed as I
12 understand it by the University of Cincinnati for
13 potential failure of the K-65 silos. I believe, but I
14 cannot speak directly to it, that there have been
15 other evaluations of the potential consequences of the
16 failure of the K-65 silos by like a worse case
17 evaluation by Oakridge National Laboratory. I do not
18 recall the report number on that, but that's somewhere
19 stored in my brain that I heard of that.

20 MR. BISCHOFF: Does the geology of the
21 site decrease or increase threat from earthquake?

22 MR. GALBRAITH: I'll answer that.
23 There are fault systems that run through the central
24 part of Ohio and Kentucky --

1 MR. BISCHOFF: I don't know if that
2 microphone is on.

3 MR. GALBRAITH: There are fault
4 systems which run through the central part of Kentucky
5 and do extend northwards up to the Portsmouth area
6 into the eastern part of Ohio. The local geology here
7 really does not enhance or decrease any of the threat
8 from earthquakes. Certainly if you are built on
9 bedrock, you're in a better situation than if you're
10 built on water saturated clays and soft materials,
11 film materials. The situation of the FMPC is that
12 it's basically built on rather stable soils in the
13 site, although we do have potential for earthquakes in
14 the Central United States.

15 MR. BISCHOFF: I will ask the public
16 as I'm communicating these questions, if you are not
17 satisfied that your question has been answered, please
18 jot notes down and I will ask that you would come to
19 the microphone when we open it for the public or send
20 it up with a runner, additional questions up to me if
21 you would prefer.

22 MR. BISCHOFF: Andy Avel, what
23 information is provided to those on the RI/FS mailing
24 list?

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1 MR. AVEL: The information that is
2 provided on the RI/FS mailing list is FMPC updates and
3 notifications of upcoming meetings, and those are the
4 items that you will receive if you're on the mailing
5 list for the plant.

6 MR. BISCHOFF: Also it is asked if you
7 would again clarify how individuals can obtain copies
8 of information in the reading rooms?

9 MR. AVEL: In the reading rooms we
10 have a copy machine available. I believe the one at
11 the site right now -- I was in there the other day,
12 the machine was not plugged in, but we're going to get
13 that thing operating in the very near future. So at
14 the reading rooms the capability to make your own
15 copies does exist there.

16 MR. BISCHOFF: Where are the hazardous
17 materials removed from Fernald being taken?

18 MR. AVEL: I'm going to have to ask
19 one of the other staff if they can respond to that
20 question.

21 MR. CARR: If you're referring to the
22 transport of low level waste off-site, they have been
23 transmitted to the test site.

24 MS. McCORD: There's material that has

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1 been sent to Oakridge incinerator, right?

2 MR. CARR: Right. We have a storage
3 of some hazardous waste material on-site which they
4 have been transported to a storage facility at
5 Oakridge, Tennessee for future incineration in a
6 permitted incineration facility.

7 MR. BISCHOFF: One observation I make
8 from the chair, if in fact in answer to a question any
9 member of the panel or any of the other presenters
10 would feel the need to further clarify that answer, I
11 don't think we're concerned about egos. We're
12 concerned about completeness of the answer to the
13 audience, so I appreciate a free flow of information.

14 Andy, why did it take so long to notify
15 the Pottengers October 10 that the contamination of
16 the well on their property when that information was
17 available in June?

18 MR. AVEL: That's a question that I
19 really don't know the answer to. I do know that the
20 site office is going through a lot of changes and that
21 very high on our list of priorities is to see to it
22 that these things do not happen again. We are human,
23 we do make mistakes, but we are going to do everything
24 in our power to see that information concerning the

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1 migration of contaminants off-site is made public as
2 soon as possible. Just one additional statement, the
3 well that is on the Pottenger property is one of the
4 RI/FS wells and is not a supplier of drinking water.

5 MR. BISCHOFF: Bob, welcome to the EPA.
6 We have a question for you. It's asked if you would
7 please explain the work being done by Paddy Run site,
8 what contamination do they have?

9 MR. OWEN: Our agency is currently
10 monitoring both sediment water, ground water, the same
11 type of things that FMPC is doing, and as far as what
12 the level of Paddy Run site, we have not seen anything.
13 Our concern is what is ingested in the pathways
14 through to the general public so we're looking
15 primarily at drinking water sites, drinking wells, and
16 we have not found any levels of uranium in those wells
17 that would be imminent danger to public health and
18 safety. Now, as to specifically the Paddy Run area,
19 I'm not sure I understand the question.

20 MR. MITCHELL: Could you read that
21 again; is that the Paddy Run Road site we're asking
22 about?

23 MR. BISCHOFF: The question is simply
24 stated, explain work being done by Paddy's Run site is

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1 the first part of the question, and the second
2 question was what contamination do they have.

3 MR. MITCHELL: As I mentioned just a
4 few minutes ago, there is another RI/FS just starting
5 with the Paddy's Run Road site, and that is made up of
6 two companies, Ruetgers-Nease and Albright & Wilson,
7 who used to be Mobile and Mobile is also a player in
8 this. Mike Starkey is the site coordinator. I'm
9 going to refer to him, have him come up and give you a
10 brief description of what's going on at the site and
11 the contaminants involved.

12 MR. STARKEY: As Graham just got done
13 saying, the study is really just beginning. What
14 we're looking at, what we're interested in there at
15 that site is chemicals that were used in processing of
16 materials at the facilities in the past. We've got
17 some evidence to indicate that there may be
18 contaminants released into the ground water south of
19 the Paddy's Run Road facility. Those chemicals that
20 we've seen that we feel are attributable to those
21 facilities include benzene, xylene and cumene and
22 arsenic. A soil gas study that was done at the
23 Ruetgers-Nease facility, because they're the ones that
24 handle the benzene and the xylene compounds, show

1 evidence of contamination on the property. It's just
2 that we haven't gotten started with the study enough
3 to see how far south off-site that contamination
4 extends, and that's something we're going to be doing
5 over the next year or two.

6 We've had, the companies that are
7 involved in this study have had some problems, one
8 being trying to get access to off-site properties to
9 do their studies, to do a complete study. We hope to
10 have that problem worked out in the next month or so
11 so we can get started. There was another problem with
12 the laboratory that was going to do the chemical
13 analysis of soil and ground water samples and that is --

14 MR. BISCHOFF: Let me interrupt you a
15 second. It's suggested that we have a map in the back
16 and it would be easier if someone could bring that
17 forward, the speaker could reference that map and it
18 may be useful to the audience.

19 MR. STARKEY: It's going to be kind of
20 difficult to see, but the main facilities that we're
21 interested in here, the property boundary is
22 essentially a triangle that extends up Paddy's Run
23 Road and down the railroad tracks and then down to New
24 Haven Road. The southern portion of that triangle is

1 the Ruetgers-Nease Chemical Company facility, and the
2 northern part is Albright & Wilson, which used to be
3 owned and operated by Mobile. The study area itself
4 essentially extends from Willey Road down all the way
5 to right now we're interested in an area that is
6 approximately along Route 128. That's the initial
7 study area.

8 If contamination is found to exist
9 beyond that, then the companies will be required to
10 extend the study area to fully characterize any
11 contamination that's in that area. Right now I
12 mentioned that we have some evidence of ground water
13 contamination that we believe are attributable to both
14 those facilities were detected in a Department of
15 Energy monitoring well at that position right there.
16 We're having difficulty getting access to property up
17 here, which is a real key piece of property to allow
18 us to figure out just how that contamination is
19 distributed there. But hopefully, things will start
20 moving ahead a little quicker in the next couple of
21 months. So like I said, we're just really getting
22 started. There isn't a whole lot of information out
23 there right now.

24 COMMUNITY MEMBER: What did you start

1 to say about the laboratory?

2 MR. STARKEY: The companies had a
3 laboratory when they sampled the ground water and the
4 soils, they submit that to a lab that will do the
5 analyses. That laboratory is kind of a long involved
6 process, but they essentially were disqualified from
7 doing the analysis, so Mobile, Albright & Wilson,
8 Ruetgers-Nease went ahead with getting their -- they
9 are actually going to have two labs now to do
10 different parts of the analysis, and they have
11 submitted to us, to Ohio EPA, those proposed
12 laboratories, and we're reviewing their quality
13 assurance, quality control plan to see that it's
14 adequate, and then once we approve that, they can move
15 ahead with doing the sampling. Hopefully within 30 to
16 60 days at most that will be taken care of.

17 MR. BISCHOFF: Thank you very much.

18 MS. McCORD: For point of
19 clarification, there is this other investigation
20 that's being done by these private parties and the
21 state is overseeing it, but what's confusing or maybe
22 might complicate the situation is that the
23 contamination from these facilities may be overlapping
24 or the contaminant plume might be overlapping with the

1 contaminants that have come from FMPC, but even though
2 these other companies are on their own schedule, I
3 wanted to clarify that the work that is being done for
4 FMPC is not going to be slowed up. The investigation
5 is going to continue even though there's a separate
6 effort. We will be using the information and trading
7 back and forth, but we're not going to slow things
8 down to let the other investigation catch up.

9 MR. STARKEY: That's a good point,
10 because the Paddy Run people will be working on this
11 for the next year at least, depending on what they
12 find, possibly longer than that. At this point it
13 could end up being a fairly complicated study.

14 Another thing Catherine reminded me
15 that I should say, the companies that are on the Paddy
16 Run site are under a consent order with the State of
17 Ohio to do that investigation, so it's not like they
18 can quit whenever they feel like it if it ends up
19 being too expensive to do an investigation. We have
20 an enforceable order that we can essentially take them
21 to court if they violate the terms of that order. So
22 it's, you know, they have given us a commitment by
23 signing that order to do the investigation, and we've
24 committed to overseeing it that they do a thorough

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1 study.

2 MS. McCORD: And, Mike, correct me if
3 I'm wrong, but when you come to the point of selecting
4 the remedy for this Paddy's Run site, there will be an
5 opportunity for the public to participate and review
6 those documents, right?

7 MR. STARKEY: Right. Our public
8 participation process generally follows the federal
9 Superfund Process Act, probably not to that
10 sophistication though, but, yeah, we will take public
11 comments and interested individuals. I'd welcome
12 anybody, any phone calls or letters or whatever with
13 requests on what's going on periodically throughout
14 the study. We have a work plan for the Remedial
15 Investigation Feasibility Study, and we will have some
16 preliminary, what's called a preliminary activities
17 report that the companies have done, and that was just
18 essentially trying to define ground water flow
19 directions in that part of the area. Like I said,
20 they did a soil gas study on part of the
21 Ruetgers-Nease property and also did a private well
22 survey where they tried to locate private wells which
23 would be potential receptors of any contamination. So
24 they put that together and that should be finalized in

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1 the next couple of weeks. So we've got a work plan
2 that spells out what the extent of the investigation
3 is going to cover, and we've got at least some initial
4 data report that's going to be out shortly.

5 MR. BISCHOFF: Thank you. Keep those
6 cards and letters coming. Next question.

7 If soil samples have been properly
8 taken around the New Haven area, especially in farm
9 lands next to the town cemetery near homes -- I think
10 it's on Creek Run the writer comments, "Having been
11 raised from a child to a young man I'm curious to the
12 personal findings of strange residue in the soil
13 there."

14 John, are you involved in the soil
15 samples in that area?

16 MR. FRAZIER: I'm not sure I exactly
17 know where you're talking about, but--

18 MR. BISHOP: Would you like me to
19 repeat the question again?

20 MR. FRAZIER: I don't think it would
21 help -- I'm not sure where they're talking about
22 exactly.

23 Let me just comment on the soil
24 sampling. As I mentioned, January 31st we presented a

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1 map showing the concentration of uranium that have
2 been measured in soil from on site all the way out to
3 and slightly beyond five miles from the center of the
4 site. Those data are still available. You can get
5 those.

6 The question I think related to were
7 they adequately taken. If this is off-site the
8 property, and if it was taken as part of the '86
9 sampling method; that is the same sampling method that
10 was used during the on-site and perimeter sampling of
11 the Remedial Investigation.

12 MR. BISCHOFF: This will be another
13 sampling question. Has the Dry Fork Creek system been
14 subject to the same test as Paddy's Run Creek? There
15 seems to be an observation that wild life, especially
16 fish are no longer around their. Anyone in a position
17 to speak to the wild life?

18 MR. MITCHELL: I may be able to speak
19 to that a little bit.

20 First of all, there is really not a
21 connection, a pathway connection between the Fernald
22 site and the Dry Fork area. It is not really downwind
23 of Fernald for even air deposition. My impression of
24 what has happened to Dry Fork, is in the last couple

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1 years we've had very dry years, not so much this past
2 summer, but the previous summer, and Dry Fork dries up
3 almost completely. I know that even in the park area,
4 Miami Whitewater Forest some of the areas that we have
5 sampled in the past completely dried up, and there was
6 a nice fish population in there, and that was
7 completely wiped out because of basically no water
8 last year.

9 So when those kinds of things happen,
10 it takes quite -- it takes a few years for the
11 population of fish to return. My guess is that that's
12 what's happened in Dry Fork or Whitewater.

13 MR. BISCHOFF: In trying to sort out
14 the next question of the series, it dealt with
15 contamination waste removed from the area, and I think
16 we have spoken to that question earlier. The question
17 is written: Why isn't it better to build concrete and
18 steel containment tanks to store it in -- I'm assuming
19 that's the waste -- as they do on the Pacific coast
20 line. Is this not endangering new areas of the
21 environment if we move the waste elsewhere?

22 MR. YEASTED: There are three parts to
23 this question that I can read into it. The first one
24 is the question of taking the material off-site and

1 contaminating new area. We are only looking at in the
2 Feasibility Study existing disposal sites that have
3 been approved for material such as would be released
4 on Fernald. There are only a few of these in the
5 country, and you can count them on one hand.

6 Part of the problem we're facing is
7 that the states that have these sites are more
8 reluctant today than they were a few years ago to
9 accept large volumes, so the on-site issue is being
10 addressed for a couple of reasons. One being that it
11 may not be available for us to take it off-site to an
12 approved facility.

13 Secondly, there is a major public
14 health issue that has to be balanced, and that is the
15 transport of the waste from Fernald to another state
16 or site.

17 The issue of the on-site engineering
18 aspects, the concern about whether concrete and steel
19 will be used, I, you know, we are not talking here
20 about simply taking a waste and piling it somewhere on
21 the site. We are looking at a major engineer facility
22 that will probably have an interim step involved where
23 the waste will be packaged in appropriate vessels,
24 stabilized in those vessels, and then those vessels

1 will be put inside some type of engineer facility like
2 the concrete facility or ones that meets applicable
3 requirements. So, you know, the system we're looking
4 at is a very well engineered system and very much
5 along the lines of what's being suggested in the first
6 place.

7 MS. McCORD: I would like -- It's been
8 EPA's goal to sort of move away from this, you know,
9 shifting of waste around, and just disposing it
10 somewhere else. And what we're looking for is
11 treatment technology where wastes are rendered to be
12 in a situation less a potential of hazard or less
13 mobile in the environment. So we very seriously look
14 at the cleanup options that include some kind of
15 treatment of the waste residues rather than just
16 digging it up and dumping it somewhere else without
17 doing anything to it.

18 MR. BISCHOFF: Thank you. When will
19 information be available to local residents regarding
20 medical testing? When will information be available
21 for local residents regarding medical testing?

22 COMMUNITY MEMBER: You can answer that
23 question at the press meeting Thursday night. I don't
24 think anybody here can answer that question.

1 MR. BISCHOFF: That will be answered
2 at the press meeting Thursday night, unless someone
3 has insight that they would like to share this evening.
4 Going once, going twice.

5 Andy, could you please explain the
6 operable unit concept and what is in them?

7 MR. AVEL: The operable unit concept
8 is a tool that is provided by the Superfund process to
9 allow a site that is as complex or as complicated as
10 this site to divide areas up into more manageable
11 units. The operable units at the site -- I guess my
12 poster is down -- operable unit 1 is waste pits 1, 2,
13 3, 4, 5, and 6, a clear well and a berm pit. I can
14 read these, and I will, but also what might be best is
15 we have a poster in the back, and after the question
16 and answer -- we have a photograph in the back that
17 has the operable units that are highlighted and
18 numbered that show you specifically what the, where
19 those operable units are and what is included in them.
20 Operable unit 2 is the other, called other waste units,
21 includes fly ash, lime sludge ponds, landfill, scrap
22 metal, and south field area. Operable unit 3 is the
23 production and suspect area. Operable unit 4 are the
24 K-65 silos and I believe silo 3 also. Operable unit 5

1 is environmental media, that's the entire site. When
2 you take all the other operable units out of the site,
3 what's left is operable unit 5, and then operable unit
4 6 is the South Plume.

5 And I really feel that that is an
6 inadequate response, and I would ask that you get with
7 me maybe after the question and answer period, and we
8 can go back and take a look at the photograph in the
9 back and I can show you in more detail, perhaps make
10 it a little more clear what the operable units are.

11 MS. MCCORD: I would like to explain
12 the operable unit scheme in just a little bit more
13 detail. Obviously, there's many different problems,
14 environmental problems or threats that are presented
15 by the kinds of things that have occurred at the FMPC,
16 and the approach to addressing the cleanup of
17 something like the K-65 silos may be technically very
18 different than something like addressing the cleanup
19 of the plume that has, the ground water plume that has
20 left the facility. There may be both technical
21 differences and there also may be some time
22 differences. One of those things like the South Plume
23 might be something that we need to investigate and
24 spend a fair amount of time up front to even finding

1 where that plume has gone, what complications there
2 are, like the Paddy's Run site contaminations, those
3 kinds of things. While there might be other units
4 that only require smaller amounts of information
5 before we can sort of get started in doing the cleanup.

6 An example might be the K-65 silos.
7 Once this sampling effort that has been going on quite
8 a while is finally completed, we may be in a situation
9 fairly quickly to look at what is the technical answer
10 for dealing with that waste residue. So it
11 essentially allows the time frame for solving the
12 different problems to be offset, that we may be able
13 to deal with some problems that are potentially more
14 threatening or more serious quicker, while things that
15 are more complex and need further study, we can allow
16 to go on, to continue while the final remedy or
17 correction of the problem is not until further in the
18 future. So the operable unit is almost more of a
19 management tool than anything else.

20 MR. BISCHOFF: Thank you.

21 MR. MITCHELL: A little past history
22 on that is that some sites' operable units, some sites
23 on which there is a lot of information available,
24 operable units are picked right off the back, and it

1 was the US EPA and the Ohio EPA's position that
2 operable units were not picked right off the back. We
3 wanted to make sure that we looked at the site and get
4 all the unknowns about the site, all the unknown
5 materials that were buried and all the other
6 activities at the site. We wanted to make sure we
7 found everything. So it was about a year or a year
8 and a half into the RI/FS before operable units were
9 actually selected to make sure we were covering all
10 the bases as far as we would not leave any
11 contamination undiscovered.

12 MR. BISCHOFF: So use of that unit
13 itself is a positive sign.

14 MS. MCCORD: And basically it allows
15 us to get started on some of the work without having
16 to have defined all of the problems. So if we know
17 enough about something about the K-65 silos we can
18 move ahead and start the cleanup now while we're still
19 investigating something like the production area.

20 MR. BISCHOFF: That meets the
21 community's best interests as well.

22 I have some plume questions here, Bob.
23 We don't want to leave you out. A New Baltimore
24 resident would like to know how deep is the plume from

1 the surface.

2 MR. GALBRAITH: Generally speaking, we
3 find uranium in what we call our 2000 series wells.
4 These are wells that are drilled into the top of the
5 water table in the sand and gravel aquifer and down in
6 the area of the South Plume south of New Haven Road,
7 where there's no -- I'm sorry -- south of Willey Road,
8 where there's no tail and further south of New Haven
9 Road. The depth of the water is on the order of as
10 shallow as maybe 10 feet but more likely 15 to 20 feet,
11 so over in the New Baltimore area where you do have
12 more material on top of the sand and gravel aquifer,
13 you may be looking at the depth of 20 to 30 or 40 feet,
14 depending on where you are actually starting your
15 drilling on the surface. The water table will be no
16 deeper than the water level in the Great Miami River,
17 so if you know your house is say 40 feet above the
18 Great Miami River, then looking at the top of the
19 water table under that site, the water would be on the
20 order of a 40-foot depth, and it is in these shallow
21 wells or relatively shallow wells that penetrate just
22 the upper part of the sand and gravel aquifer we are
23 finding the majority of the uranium. Now, we're not
24 finding anything or any reason to believe there would

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1 be anything all the way over in the New Baltimore area.
2 I'd be happy to talk with the person that has the
3 question with the photograph in the back to show them
4 how we come to that conclusion.

5 MR. BISCHOFF: Is the plume spreading
6 in all directions or just southeast?

7 MR. GALBRAITH: The plume seems to be
8 spreading principally to the south, southeast, and we
9 have a very strong water table grading; in other words,
10 the water table surface slopes steeply to the south,
11 southeast in the area between the two bedrock zones in
12 that narrow channel which Fernald, the Village of
13 Fernald sits in the center of, so that's maybe where
14 it's going. We're seeing that the plume travel in
15 relatively narrow plume, or the long, skinny plume
16 rather than a short, fat plume because it's very easy
17 for water to pass through the aquifer and without any
18 resistance to flow, the plume will stay skinny,
19 whereas if you have resistance to flow, it will slow
20 down and tend to spread laterally.

21 MR. BISCHOFF: At what speed is the
22 plume moving?

23 MR. GALBRAITH: That's a very
24 difficult question to answer. Right now we have -- we

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1 have ground water velocities that we can measure
2 fairly well and calculate fairly well. What we're not
3 a hundred percent sure of is whether or not the
4 uranium is traveling at the same speed as the ground
5 water itself is. It appears that the ground water is
6 traveling quite a bit faster speed than uranium, the
7 ground water is moving more quickly than the uranium.
8 So we're looking at few tens of feet per year at most
9 in the migration of the uranium itself.

10 MS. McCORD: Can you tell us a little
11 bit about the particle modeling that's going on?

12 MR. GALBRAITH: I'm not intimately
13 familiar with that, but we do look at particle
14 tracking. If you took a particle of water at a given
15 location and you know what the gradient is for a
16 certain number of months that would be causing that
17 particle of water to move, we could calculate where
18 that particle of water would move and as the gradients
19 change, we can then predict and show over a series of
20 years where that would be, and in fact it is that kind
21 of modeling that has led us to the diagrams that are
22 in the back of the room that show where we think the
23 plume is now, even though we don't have monitoring
24 well data to verify that entire extent of it.

1 MS. McCORD: As soon as those
2 additional wells get placed and that ground water gets
3 placed in that south field area, we'll know a lot more
4 about the transporting of the contaminants. There's a
5 lot of unknowns without enough information that we're
6 sure that we've got some degree of certainty in
7 tracking the contaminants.

8 MR. BISCHOFF: I think it is
9 appropriate to begin the questions from the floor at
10 this time.

11 COMMUNITY MEMBER: Back in January at
12 the RI/FS meeting I asked the question if they were
13 going to drill any wells south of New Haven Road, and
14 I was told no, there was no reason to do so. And I
15 wondered at this time why did you drill, finally
16 decide to drill a well south of New Haven Road?

17 MR. GALBRAITH: Actually, we've had in
18 our plans since last October to drill the two wells
19 that, actually the two wells that we drilled this
20 spring south of New Haven Road, so all I can say is
21 either you didn't ask the question of the right person
22 or, if it was me that gave the response, I didn't give
23 you the right response.

24 COMMUNITY MEMBER: It was in a little

1 divided room with, you could only fit 50 or so people.
2 It was not misunderstood. It was directed either to
3 you or whoever was with you in the room at that time.

4 MR. GALBRAITH: At that time we had in
5 our plans to drill these wells south of New Haven Road.

6 COMMUNITY MEMBER: We were not given
7 that information.

8 MR. GALBRAITH: All I can do is
9 apologize.

10 COMMUNITY MEMBER: Again, when you
11 find that in the well, it takes you nine months to
12 tell us you found uranium in it.

13 Another question is do you classify
14 this uranium? Is it U-235, slightly enriched, is it
15 U-230A, or are you going to tell us it's like the
16 diagrams?

17 MR. GALBRAITH: Well, the diagrams we
18 presented are total uranium diagrams. I don't know if
19 anyone wants to address the significance of that in
20 terms of isotopic concentrations or not.

21 MR. FRAZIER: I don't know that I can.
22 I'd have to look at the laboratory results. Usually
23 they look at the total uranium, which includes the
24 uranium 238, 234, and 235 in the material. I'm not

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1 aware that there's ever been found any uranium
2 concentrations which weren't in the natural ratio of
3 isotopes. Although there are above background
4 concentrations of uranium, the isotopic ratios of all
5 the numbers I've ever seen have been in natural ratios,
6 so it would consist of -- if it followed that same
7 pattern, it would consist of uranium 238 and 234 would
8 be the principal if you took a total uranium
9 concentration of say of 37, with that natural isotopic
10 ratio, if that were indeed the case, you would have
11 with that approximately 18 picocuries -- well, I have
12 to reback that out. If you convert that to activity
13 first and then do the ratio of activity, then you've
14 got it, because it was just massed activity not the
15 same as isotopes so that 37 micrograms per liter would
16 convert to approximately 25 picocuries per liter, and
17 of the 25 picocuries per liter, approximately 12 would
18 be U238 and about 12 would be U234, about one would be
19 U235. In the natural isotopic ratio.

20 COMMUNITY MEMBER: So there's no
21 misunderstanding that is coming from the FMPC plant it
22 would not be in those wells if that plant had not been
23 located up there.

24 MR. FRAZIER: Is that a question?

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1 COMMUNITY MEMBER: No, that's a
2 statement.

3 Also uranium in federal court it was
4 admitted by the DOE there is no safe level, so I don't
5 care what your figures on picocuries, whatever, there
6 is no safe level. All you need is one little piece of
7 that in your system and you can pass it on through
8 your genes to your children and it can show up years
9 from now.

10 MR. BISCHOFF: What I would suggest to
11 people in the audience is that there are cards back at
12 the Community Participation table, and if you would
13 have specific questions that you would like additional
14 written feedback or response on, and if you leave that
15 you will be responded to within 30 days.

16 MS. McCORD: We still encourage you if
17 you have questions right now, I think everyone learns
18 something from these question and answers sessions, to
19 come up and ask your questions as a follow-ups. Just
20 as a point of clarification, there will be additional
21 discussions other than what currently has been
22 proposed and approved by Ohio and US EPA for that
23 south field area, so there are going to be in fact
24 discussions tomorrow about the need for additional

1 ground water monitoring wells for that area. So again
2 you know we've had difficulty in gaining access to
3 some of those properties for permission to install
4 ground wells. That fact is an issue that is going to
5 be discussed at higher levels between the state and
6 the EPA at a meeting on Tuesday. We're hoping to
7 resolve that issue and move ahead with additional
8 wells that are needed.

9 MR. BISCHOFF: Yes.

10 COMMUNITY MEMBER: We're rapidly
11 coming to the end of '89 and we have yet to see the
12 '88 monitoring report. Is there a reason that
13 information is being withheld from the public?

14 MR. BISCHOFF: The question dealt with
15 the amount of availability of the '88 monitoring
16 report. Andy will respond to that.

17 MR. AVEL: There's nothing that the
18 Department is trying to hide by the fact that these
19 reports are unavailable to the public. It's a change
20 of policy that's across the board with the Department.
21 All the sites with the exception of those that
22 published their environmental monitoring report before
23 the Department put a freeze on them. It's an effort
24 for the Department to better assure those that receive

1 the environmental monitoring report, that any areas in
2 the reports that are out of compliance or are
3 indications of concern are adequately addressed by the
4 plant in this case. We're just caught up in a change
5 of policy by the Department, and as soon as we get the
6 procedures, the new procedures for releasing the
7 reports, they will be released, but I assure you
8 there's nothing we're trying to hide, and this is
9 again true across the board of all DOE projects.

10 COMMUNITY MEMBER: How soon might we
11 expect to see the report?

12 MR. AVEL: Ray, do you have any --

13 MS. MCCORD: Ray, do you mind briefly
14 for everybody in the room just briefly explain what
15 that environmental monitoring report is.

16 MR. HANSEN: There are experts here
17 that can explain that better than me, but to answer
18 your question about when that will be released, we
19 really don't know. It's like Andy said, it is now DOE
20 policy across the board that all environmental
21 monitoring reports are to be approved by headquarters
22 and released by headquarters. All I can tell you is
23 that as soon as we get that released, we will make it
24 available to you.

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1 MR. BISCHOFF: The question I would
2 have, when issues are raised like this which I guess
3 would tend to fall under unfinished business, is there
4 a way these can be carried forward to the next
5 community meeting such that that can be a first item
6 of business at the next meeting.

7 MR. HANSEN: I think that's a good
8 idea.

9 MR. AVEL: That's a good point.

10 COMMUNITY MEMBER: Can I ask you a
11 second question?

12 MR. BISCHOFF: Go ahead.

13 COMMUNITY MEMBER: The other one is
14 for the people that are talking about the risk
15 assessment. You were indicating that you calculate
16 the exposures to the people, and my question is are
17 those exposures ever done in relationship to children
18 and the effects on children? Have there been any
19 studies done on what radioactivity and the chemicals
20 do to children because what it does to an adult could
21 be extremely different compared to our kids.

22 MR. FRAZIER: In terms of the intake
23 calculations we have looked at the differences in
24 calculating intake rates of the adult versus the child

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1 in such things such as water and various types of food
2 crops. We have looked at those, and that is a part of
3 the calculation process. The numbers that I quoted
4 say for external exposure would apply to any
5 individual no matter what age if they could stay at
6 that boundary 24 hours a day, 365 days a year. The
7 second part of that is with regard to the internal
8 doses. There are, if you'll notice when I did the
9 water calculation, I started with the 200 picocuries
10 two liters, 365 days a year, and then it sort of
11 magically appeared this 37 mrem as the number there.
12 That number was determined by using a dose conversion
13 factor, and that dose conversion factor is done for
14 what they call a reference man in its certain mass and
15 certain metabolic information. Those dose conversion
16 factors have been calculated for adults. They have
17 not been calculated in general. We can do those
18 calculations, we have not done them yet, but they have
19 not been calculated and tabulated for all age groups
20 including the teen and the younger child. That is a
21 much more involved process. We do intend to do that
22 as a part of the risk assessment to evaluate the
23 potentially exposed populations, but the numbers I was
24 presenting was for the reference man dose conversion

1 factors.

2 COMMUNITY MEMBER: Could there be any
3 imminent or substantial effects to our children while
4 we're waiting for all these statistics to be compiled?

5 MR. FRAZIER: In my opinion not in the
6 concentrations seen or in the intake rates that are --
7 we do have intake rates that are EPA risks for various
8 age groups, not from those I do not think.

9 One of the key concerns we have looked
10 at has not been a part of an operable unit today but
11 we looked at it, that has been the sediment along
12 Paddy's Run because there was concern about that. If
13 you use the standard intake rates for pica for the
14 young child or the child which might play in that for
15 potential for chemical toxicity, the concentration of
16 uranium off-site, the highest sediment concentration
17 that I have seen through the '87 and '88 sediment
18 sampling, we did a summary of all that data, I recall
19 was about nine picocuries per gram. That was above
20 background; that was not in concentration at the
21 intake rates for ingestion of that sediment which
22 would give toxicity, the damage to the kidneys.

23 COMMUNITY MEMBER: Are you adding the
24 risk assessments for each of the six operable units

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1 together as a total?

2 MR. FRAZIER: That's an excellent
3 point. When the operable unit concept came out, we
4 said what applicable or appropriate requirement,
5 applicable or appropriate requirement would be the
6 overriding requirement for the site. So we come up
7 with a list of those, but then we said if we have six
8 operable units, we can't let that apply to each of
9 those. So we're applying a fraction of that to each
10 of the operable units, and as we approach that
11 fraction, we look at all the other operable units to
12 see what other contributions there can be from them.
13 From the risk assessment point of view, it makes it
14 more difficult, and that was one of the -- although in
15 terms of capabilities that was a little handier, but
16 for the risk assessment it makes it a little more
17 difficult. The key operable unit, though, I think
18 will be after the operable units 4 and 6 are completed
19 will be the operable unit 5, which is the
20 environmental media, which includes off-site areas,
21 soil off-site, ground water that's not included as
22 part of the South Plume, surface water and sediment,
23 and those will be in the operable unit 5, and I think
24 that will be a key one to look at.

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1 MS. McCORD: Something else to keep in
2 mind, we're talking about a lot about the risk from
3 radiological hazard. You have to remember that some
4 of these operable units include the more traditional
5 chemical hazards also, so the risk assessment for the
6 radiological hazards will have to be blended in and
7 added into the risks presented by any other hazards or
8 whatever it is that might be involved in that operable
9 unit. And this is sort of interesting, it was a
10 discussion that Graham and I had with a site last week
11 on how will the risk assessment be pulled together
12 because under the current operable unit scheme, do you
13 start adding these risks up from one operable unit to
14 another, and at what point are we going to have a
15 final decision document that encompasses all the
16 hazards from all of the operable units because they
17 really aren't separate. In many cases they overlap
18 and what we are envisioning now and we have not
19 finalized essentially is that the Records of Decision,
20 which again are the decision documents for each
21 operable unit selecting the remedy will be somewhat
22 cumulative and that the last Record of Decision will
23 have pulled together all of this information from all
24 the hazards. So trying to work through how to exactly

1 do this logistically.

2 MR. BISCHOFF: Thank you.

3 THE WITNESS: Catherine McCord, you
4 mentioned some negotiations going on for perhaps a new
5 agreement with DOE, and I'm wondering about what the
6 obstacles are to finalizing such an agreement and why
7 extensions are being made, and in what areas and
8 generally and specifically why are these extensions
9 being made?

10 MS. McCORD: I see two questions there.
11 I guess from -- I'll talk about the obstacles to
12 getting an agreement finalized from EPA's prospective;
13 if DOE or others would like to contribute something,
14 you're welcome. We are not in agreement on many of
15 just smaller details of the agreement, one of which is
16 schedules. But there are other aspects and probably a
17 major one is whether or not this agreement will be a
18 three-party which means the State of Ohio is a formal
19 participant in the agreement or whether or not we'll
20 proceed with what we've been doing so far is
21 negotiating only between US DOE and US EPA. So that
22 is probably a very fundamental barrier to proceeding
23 with negotiations, and again we've got a fairly high
24 level meeting with DOE between the State of Ohio, the

1 US EPA out of Chicago and out of our headquarters, and
2 US DOE out of Oakridge, the locals and out of
3 Washington that's scheduled for this Tuesday.
4 Hopefully we will be able to resolve this issue of a
5 two-party versus a three-party agreement.

6 The need for extensions is probably
7 something that's independent really of the new
8 agreement, but since the issue of requiring more time
9 came up last December and at the request of DOE, the
10 Ohio EPA and the US EPA have looked very critically at
11 those requests for more time and are they technically
12 needed and what can we do to prevent these slippages
13 of schedules in the future. My honest opinion is that
14 when the schedules were set up initially, there may
15 not have been an in-depth enough analysis on the part
16 of the plant on what time would be required to
17 actually finish the work that was needed, and that
18 it's not that the scope of the work has expanded but
19 rather maybe the solutions are going to be a little
20 more complex than people thought initially.

21 We have not finalized these dates on
22 when each operable unit of RI/FS reports will be
23 completed and that we sort of use these Record of
24 Decision or ROD dates as target dates. We have not

1 finalized these new dates with DOE. EPA has primarily
2 been shooting towards dates that were discussed
3 between EPA and DOE from last February. There are
4 some new dates for these operable units that have been
5 presented to EPA just in the last week and a half.
6 And we have not formally sat down with DOE to discuss
7 those dates. Those dates are in the draft report that
8 cites response to the Tiger Team. When EPA was asked
9 for more time to do these remedial actions, we felt
10 there may be grounds for some extensions; again we
11 haven't agreed on all the times, but we also felt that
12 the removal actions would be needed. We've put this
13 together essentially as a package that will allow us
14 more time for remedial long-term cleanup if we get
15 also some removal action in more short term. We are
16 not in agreement even on the schedules on the removal
17 actions right now, and they are still a matter for
18 negotiation.

19 COMMUNITY MEMBER: Have you any idea
20 when this thing may be concluded?

21 MS. McCORD: About the new cleanup
22 agreement?

23 COMMUNITY MEMBER: Yes.

24 MS. McCORD: I would think after

1 Tuesday's meeting we may have a better idea of when
2 that may happen.

3 COMMUNITY MEMBER: Since you may very
4 well be the only watchdog that we have, we're counting
5 on EPA for oversight.

6 MS. McCORD: That's why we're here.

7 COMMUNITY MEMBER: I wonder if you
8 believe that DOE is equipped, maybe equipped is not
9 the right word, I mean the appropriate agency, I'm
10 asking this question of the EPA people is the
11 appropriate agency to do cleanup of their weapons
12 facilities. I mean, I know there's legislation to
13 have this sort of thing taken over by a department
14 like HHS. I am really asking a question, I do want to
15 know what your opinion is because DOE's mission is
16 energy and weapons production, and they're not in the
17 business of doing this sort of thing.

18 MS. McCORD: I have response to that.
19 Basically in the bigger picture of the Superfund
20 Program, there's sites are cleaned up two ways.
21 Either EPA as a US EPA or a state EPA overseas a
22 company investigation and then ultimate cleanup, or
23 they use Superfund dollars out of the magic big fund
24 to cleanup the site themselves and then go to court

1 and recover costs from people that contribute to the
2 problem. So it's not out of the ordinary for EPA to
3 oversee the investigation or the cleanups of sites, so
4 in that situation I think this is what applies here,
5 is essentially EPA is providing the oversight as the
6 watchdogs of that investigation. And we aren't in
7 agreement on a lot of things. We challenge many
8 things and there's a lot of pushing and shoving back
9 but that's not unique to the situation here. That's
10 pretty typical of a situation when you have a
11 regulatory agency like the EPA who are overseeing a
12 company doing the investigation on cleanup.

13 COMMUNITY MEMBER: Then you're not
14 really saying that DOE is an inappropriate agency.

15 MS. McCORD: I don't think -- I think
16 that they are an appropriate agency to -- they are
17 responsible for cleaning up that site, and in some
18 sense they have -- they hire their own technical
19 consultants to investigate and provide their own
20 guiding light, as would EPA if EPA was doing the
21 cleanup themselves.

22 COMMUNITY LEADER: If you would
23 indulge me, I have a couple other questions. I'm
24 wondering if in DOE's opinion if DOE reps believe that

1 the Fernald plant is in compliance with the December
2 '88 consent degree?

3 MR. AVEL: Everybody is looking at me.
4 I have not been around long enough to be able to
5 answer that. I've been at the site for six weeks, and
6 I am not familiar with what's --

7 MS. MCCORD: DOE's position may be
8 somewhat looking at the Tiger Team report.

9 COMMUNITY MEMBER: And I have a
10 question about that too.

11 UNIDENTIFIED SPEAKER: I really think
12 that the Tiger Team report did make some commentary.
13 The consent degree, there are two consent degrees with
14 the State of Ohio. One relates to the operation of
15 the pilot plant fundamentally. The other relates to
16 run-off of water, water control, if you will. The
17 Tiger Team fundamentally addressed not those two
18 issues, but the RI/FS process. Are we in compliance,
19 from a Westinghouse viewpoint, we believe we're in
20 compliance with the consent degree. We're not even
21 operating the pilot plan, for example.

22 COMMUNITY MEMBER: The areas in which
23 the Tiger Team report was critical of compliance with
24 environmental safety and health laws were very broad.

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1 They even -- they were very critical even of the
2 process and the characterization in my opinion and
3 monitoring of waste here. And I am wondering, I'm
4 wondering what has been done to try bring this into
5 compliance, and if building the staff from 9 to 19
6 from DOE is, I mean I suppose that was meant to be in
7 response to that Tiger Team report, but it was very
8 hard hitting and very critical of even the process
9 we've spent a whole hour hearing again tonight. Can
10 you tell me in what other other ways since you've been
11 on the job that you've tried to bring this place in
12 compliance with these laws?

13 MR. AVEL: Some of the responses that
14 I have run into since I've been there, I know that
15 we've constructed some berms around some storage areas
16 that may have run off that could be contaminated by
17 material that is being stored in the areas. We've
18 constructed berms to divert run off into treatment
19 facilities so that water that may be contaminated by
20 material that's being stored at the site would be
21 treated before it's allowed to be discharged to the
22 environment.

23 Dennis Carr may be --

24 MR. CARR: Maybe I can help you out a

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1 little bit, Andy. I think there's been quite a bit of
2 progress made in every area. I think you can go
3 through each one of the environmental media and look
4 at significant progress in the facility. You look at,
5 for example, air emissions. We have made significant
6 progress through implementation of tight
7 administrative controls and new pollution control
8 equipment, heat filtration systems. We have
9 effectively reduced our emissions from the facility,
10 and that is demonstrated in our environment monitoring
11 report. In the area of hazardous waste management, we
12 have minimized generation of hazardous waste. We have
13 built new storage facilities and improved existing
14 storage facilities, implemented new administrative
15 controls, developed new and more stringent procedures
16 for managing hazardous waste. In fact, that is the
17 number one priority on our site is the management of
18 hazardous waste. We have developed a very detailed
19 implementation plan to bring the facility into full
20 compliance with all RCRA regulations.

21 In the area of water, we have improved
22 our discharges to the Great Miami River, with
23 reductions of in uranium, nitrates and emissions to
24 the River. This has been done through first

1 improvements again, administrative controls and
2 improvements in facilities. We've improved the
3 treatment facilities themselves. We've installed a
4 fire transportation system to reduce nitrates to the
5 River. We have installed just recently a surge legume
6 for holding and detaining stormwater, which has
7 significantly reduced our discharges to Paddy Run,
8 which again has been elaborated here several times as
9 a potential source to the South Plume area. There's
10 been quite a bit of progress there. Not only in those
11 areas also in workers health and safety. Today was a
12 big success. Ray reported the decontamination of some
13 of our facilities, which results in the reduction of
14 fugitive emissions to the facility. There's been a
15 lot of improvement to the facility. And we can go on
16 I think for quite awhile.

17 COMMUNITY MEMBER: I was listening
18 very carefully to your litany and it seems to me that
19 in all but three cases every step that you would
20 consider progress was greatly facilitated by just the
21 cessation of production. Do you feel that that
22 contributed greatly?

23 MR. CARR: Certainly, that's a
24 contribution, but again we are planning for start up,

1 restart up, and we are designing systems, implementing
2 systems; we're getting those controls in place in the
3 event that we should restart production.

4 MR. BISCHOFF: I appreciate your
5 concerns and if other speakers have an opportunity to
6 get through their questions and if you care to come
7 back to the mike.

8 MR. MITCHELL: Excuse me, there's a
9 couple points of clarification. There are two consent
10 decrees with the State of Ohio. One deals with the
11 operation of K-65 silos and this is in reference to a
12 bending of radon, a single event that occurred. The
13 second one is a more of a broad consent decree
14 indicating RCRA compliance and dealing specifically
15 with RCRA issues, NPDES issues, issues of compliance
16 with the National Pollution Discharge Elimination
17 System permit. Deals with some remedial actions,
18 which has been rolled into the RI/FS but it is under
19 the state consent decree. Deals with the State's
20 oversight of the cleanup process.

21 The findings of the Tiger Team indicate
22 that they are not in complete compliance. And I think
23 full compliance is the term they used. And in certain
24 areas RCRA compliance has not been completely

1 demonstrated. They still are indicating violations
2 when we do inspections.

3 However, as Dennis said, when we do
4 these inspections, we do find some violations; however,
5 there has been a lot of progress made. Although full
6 compliance has not been demonstrated, and this applies
7 almost across the board, there's been so much progress
8 made that is why at this point the state has not taken
9 any additional action. The state is still looking at
10 its options in regard to the Tiger Team finding as far
11 as what we will do in the future. But I think that's
12 the main reason, not in full compliance, there is a
13 lot of progress been made.

14 MR. BISCHOFF: Yes, sir.

15 COMMUNITY MEMBER: I notice every time
16 I look over towards Bruce Boswell something seems to
17 be real funny with him tonight. Fortunately for him,
18 his family didn't drink contaminated water, so I guess
19 this is all pretty funny with him. I would like to
20 ask him first of all, how much did your little public
21 relations charade cost today in wages, man hours, food
22 drinks, and critical loss of time. I'd like an
23 itemized list of all expenditures within seven days.

24 Also why don't you just wait until

1 after the radioactive cesspool is completely cleaned
2 up? The NLO and Keystone Kops are criminally
3 prosecuted and behind bars and we can all really
4 celebrate. Is P.T. Barnum Westinghouse's idol, too?
5 Also I would like to know what reason do we have to
6 trust the Department of Energy when they have refused
7 to honor the lawsuit agreement?

8 MR. AVEL: Let me address the cost of
9 putting together this meeting first.

10 COMMUNITY MEMBER: No.

11 COMMUNITY MEMBER: We're still talking
12 about today. Squeaky clean.

13 COMMUNITY MEMBER: Do a little spring
14 cleaning and they celebrate. This is something they
15 are paid to do. My wife doesn't go out and we don't
16 celebrate every time she cleans the house.

17 MR. AVEL: The ceremony today I think
18 was justly deserved. A lot of people spent a lot of
19 time cleaning up a significant area of the plant, 1.2
20 million square feet I believe is what the figure is,
21 and in an effort to encourage, enhance and stimulate
22 that type of response, the department supports the
23 rewarding of people that do that type of work.
24 Therefore, me, I personally feel that it was justified

1 that people that show the willingness and desire to
2 comply with not only the Department's concerns, but
3 the general public's concerns need to be rewarded and
4 justly so.

5 COMMUNITY MEMBER: I totally disagree
6 with you.

7 COMMUNITY MEMBER: One thing I notice
8 about tonight's meeting which was completely different
9 is that it was DOE and not Westinghouse. Now, who are
10 we talking to, DOE or do we talk to Westinghouse from
11 now on?

12 MR. AVEL: The Department of Energy
13 wants to make it very clear that it is the Department
14 of Energy's responsibility to clean this site up. Now,
15 the Department in doing that hires the services of
16 several contractors. And in an effort to be able to
17 better communicate what is going on to site to you, we
18 ask them, require them, to be present and to speak.

19 COMMUNITY MEMBER: Now they will not
20 be able -- when I ask them about their water treatment
21 for like with the permit that Westinghouse received to
22 release their waste, hazardous waste water into the
23 Miami River, which does not cover uranium, so now
24 uranium can be released into that, I want to know are

1 they going to cleanup can they answer, are they going
2 to clean up the uranium before they let it go out into
3 the Miami River?

4 MR. AVEL: Again, it's the Department
5 of Energy's responsibility to do any cleanup. I
6 believe the discharge permit that you're talking about
7 does not address uranium.

8 COMMUNITY MEMBER: That's right.

9 MR. AVEL: However, the Department of
10 Energy has criteria that we have established that
11 governs the amount of uranium that can be released.

12 COMMUNITY MEMBER: How long will that
13 take the Department of Energy to do it, that's the
14 whole problem?

15 MR. AVEL: To reach those levels?

16 COMMUNITY MEMBER: Yes.

17 MR. AVEL: Again, I just don't know.
18 From what I understand, the permit or our requirements
19 are 550 picocuries per liter.

20 COMMUNITY MEMBER: This part of the
21 Paddy's Run I'm talking about is the South Plume where
22 kids play in the creek and that's why I'm very
23 concerned and we know of one death already.

24 MR. AVEL: Again the Department is

1 very concerned also. This entire effort is because
2 the Department wants to cleanup those areas that
3 require cleanup.

4 COMMUNITY MEMBER: You've had three
5 RI/FS meetings. This one is almost exactly the same
6 way. There has been some improvement, I'll agree with
7 you, and I appreciate that much, but it's not fast
8 enough.

9 MR. AVEL: I can't argue with your
10 observation. However, I can tell you that we are
11 proceeding as fast as we can and still be able to
12 adequately look at all the alternatives that are
13 available to us, and not only that, but to look at all
14 the complications which may arise from any one
15 alternative that we choose, and it's not, it's not a
16 short-term process. Let me if I can just -- you
17 raised another point are you talking to Westinghouse
18 or DOE. Any questions that anybody may have that you
19 may come up with after this meeting and you feel you
20 don't have the opportunity to ask, my phone number at
21 the site is 738-6322. And here's my name right here,
22 and again my responsibility at the site is to manage
23 this effort. You have questions, please feel free to
24 call me. I'll get back to you as soon as I can

1 realizing that -- I appreciate that comment -- it's a
2 big job, it's a very big job, but again the Department
3 wants to make sure that you guys understand what we're
4 doing, how we're doing it, and that your input does
5 matter and your review of the documents, your comments
6 really matter. If you can see me later on, I can give
7 you the address if you would like to write to the
8 plant. I don't know what it is, but we can get that
9 for you, but call me at the office. I'll be more than
10 happy to get answers to your questions or come out and
11 talk to you.

12 A big part of my job as I see it is
13 making sure that these folks at the table and that you
14 folks know what we're doing. Here's the address, it's
15 Post Office Box 398705, Cincinnati, 45239-8705 is the
16 zip code, and address it to me, DOE site office, and
17 I'll get them. With this I'll just ask that you be
18 patient with me and give me time to get up to speed
19 with what's going on.

20 MR. MITCHELL: Let me comment briefly
21 on the issue that was raised about uranium, the
22 emission of uranium from the NPDES permit. That's an
23 odd situation. I've explained it to some people in
24 the audience. The Atomic Energy Act prohibits the

1 state from regulating a nuclear substance such as
2 uranium, and we originally had that in our permit and
3 most of you know Jack Vonclay in the FRESH group, and
4 you know he has been very vigorous in the enforcement
5 action against the Department of Energy, and Jack said
6 there's no way we can put that limit in there, and
7 even though it's not in there, you all know this is
8 the case, that the control of uranium at this site is
9 one of the critical factors, so it is being looked at.

10 The whole elimination of the
11 stormwater retentions are keeping uranium out of
12 Paddy's Run are basically there as a result of the
13 State's actions, and we basically worked around the
14 issue by dealing with suspended solids and eliminating
15 discharge just to Paddy's Run to control uranium. And
16 so although that is out of our MTS permits, it is an
17 awkward situation; legally there's no way around it.
18 However, it is being addressed and we are looking at
19 it.

20 MS. McCORD: Something else to keep in
21 mind, any new discharges that are directly resultant
22 of something that has to do with the cleanup activity
23 will be regulated under the CERCLA process. When you
24 are looking at existing standards, like Clean Water

1 Act, Clean Air Act, but we've got another statute out
2 there to regulate any new additional affluents or
3 emissions.

4 COMMUNITY MEMBER: I have a couple of
5 things. One is a clarification. I don't think it's
6 that we mind, Andy, that you reward your employees for
7 doing a good job as far as the cleanup is concerned.
8 The three areas I noticed on here are the streets,
9 boiler plant, water treatment facility and a
10 maintenance building. It's not production areas, and
11 I think that's the problem we're having with this.
12 And I think it's fine and dandy that you, you know,
13 congratulate your employees for a doing a good job.
14 It's I think a little premature for ribbon cutting and
15 a luncheon. I work and I certainly like to be
16 appreciated for the things I do too, and especially if
17 I do a good job, but I think the problem the community
18 has with this thing that went on today was that we
19 just felt like it was a little premature.

20 Second thing I have and one of the guys
21 over here, when we were talking about the K-65 silos,
22 I heard the mention of precious metals come out of
23 somebody's mouth again, and I really have a problem
24 with this. First of all we talked about sand and then

1 that little -- as far as I was told, they were not
2 going to put the sand in the silos anymore, that it
3 was not feasible, and I saw on an overhead tonight
4 that possibly. It's my understanding that they were
5 not going to put any sand in there, and I think I'm
6 going to agree with that because I see that as making
7 more waste and causing a bigger problem. But the
8 precious metal thing, I mean I can't believe that
9 somebody still has this conception that they can take
10 this precious metal out of this waste that we have,
11 and I would like to have in writing that one clarified.

12 MR. AVEL: The Feasibility assessment
13 that we're doing will have that in writing. It will
14 say -- it will include how we are evaluating the issue
15 of taking the presses metal out of the K-65. There's --
16 this probably is not the place to get into it, but
17 there's a real interesting history about the K-65's.

18 COMMUNITY MEMBER: I know the whole
19 history, I've heard it numerous times.

20 MR. AVEL: The program I come here
21 from is again a former remedial action program, and we
22 cleaned up the Tower up at Niagram Falls that had the
23 K-65 and placed them in the storage, but I appreciate
24 your question and the documentation for that will be

1 in the Feasibility Study of the RI/FS Report.

2 MS. MCCORD: You have to look at the
3 goal here. It's not to remove precious metals from
4 the K-65's residues. It's to address the concerns
5 about where that material is being stored right now
6 and what should be done with the materials and if any
7 ways that extraction of these precious metals is going
8 to hold up this project or technically cause any kind
9 of health consideration or environmental
10 considerations, EPA is not going to buy into that.

11 COMMUNITY MEMBER: That's what I'm --
12 good.

13 MS. MCCORD: I find it a little
14 disturbing when it was brought up here too. It's fine
15 if there's a certain amount of gold in there if it's
16 incidentally pulled out in some kind of treatment
17 process, well, that's great, it's great to reuse
18 things that are valuable and the government can save
19 some money, but we're not going to hold up addressing
20 those silos for that reason.

21 MR. AVEL: I'd like to comment on the
22 sand issue also. I think that points out when we feel
23 we have an alternative or a fix that will work, be it
24 temporary or permanent, we're going to go forward with

1 it enthusiastically.

2 COMMUNITY MEMBER: I would hope you go
3 with the permanent solution more than with the
4 temporary solution because I think we get into more
5 problems again with the temporary band-aid operation
6 instead of permanent operation.

7 MR. AVEL: Agreed that's why we're
8 looking at both, but I think the fact that we carried
9 this idea to the point of evaluating what the effects
10 would be once we had more data about the K-65's while
11 we're not afraid to come to you and say we didn't have
12 enough information and the sand is not going to work
13 now, but it's an illustration of how the process is
14 working.

15 MS. MCCORD: Basically, you know, that
16 sand project I think the point was made earlier was
17 put on hold, and it looks like permanently because
18 that material is much more fluid or liquid than we
19 ever expected earlier. We are moving ahead with the
20 sand project waiting again for the analysis of those
21 samples; there were technical problems and the
22 sampling efforts has not been completed, but I can
23 assure you based on what the EPA saw in as far this
24 material being too gelatinous or fluid, there's no way

1 we would approve that sand project essentially pouring
2 sand into, I don't know, jello or something. It's not
3 going to be a solution.

4 MR. AVEL: It's exactly what you said,
5 producing more waste.

6 COMMUNITY MEMBER: The other comment I
7 have is, and again it came from this table, I don't
8 remember who, but and there was a picture of it that
9 pit 4 is now being covered; is that correct?

10 MS. McCORD: It has been covered.

11 COMMUNITY MEMBER: How long has it
12 been covered is my question. Is it just recently that
13 they started covering it?

14 MS. McCORD: It was last year, and
15 then it got too late in the construction season and
16 only essentially one half of the cover system was
17 installed. It was the clay portion, and then the
18 synthetic cover went on this spring.

19 COMMUNITY MEMBER: This is another
20 issue the community knew nothing about.

21 MS. McCORD: Let me clarify, that
22 waste pit is one of, right now one of the six or, wait
23 a minute, total of eight pits, that is considered
24 subject to the Resource Conservation, RCRA. It's

1 considered hazardous waste unit, so that closure plan
2 was committed to US EPA and Ohio EPA, was subject to
3 public notice and public comment. That occurred
4 before any of these public meetings, and we sure would
5 have brought it up if it had occurred during the same
6 period.

7 COMMUNITY MEMBER: If they just -- I
8 think the point I'm trying to make if it was just
9 beginning to be covered last fall or whenever, the
10 point is the community, FRESH, the community, anybody
11 here, we knew nothing about it.

12 MS. McCORD: That's the kind of item
13 that probably should be covered in the quarterly FMPC
14 updates.

15 MR. SHIRLEY: Catherine, I think there
16 might be a misconception. The waste pit was covered
17 with earthen materials. The cover that we put on and
18 started last fall and then continued on recently was
19 to put an impervious clay cap on it that sheds the
20 water, and then this geotextile or membrane liner so
21 that water can't infiltrate down through the waste pit,
22 the soil that was covering it.

23 MS. McCORD: I think what we're
24 talking about is the cap system. The EPA doesn't

1 consider the dirt that was there that wasn't graded a
2 cover system.

3 MR. SHIRLEY: The question I think
4 might have gone back to was it an open pit.

5 COMMUNITY MEMBER: Yes, that was the
6 impression I got.

7 MR. SHIRLEY: Yeah, and it was not an
8 open pit; it was covered with soil.

9 COMMUNITY MEMBER: The point I want to
10 make and I want to impress this on the Department of
11 Energy and Westinghouse, we need to be notified when
12 you're working on the K-65 silos or you're messing
13 around with those pits out there, the neighbors want
14 to know. Especially the people who live eleven
15 hundred feet from your boundary and they are right
16 there. These folks want to know, and I know you've
17 only been here six weeks, I'm not going to throw rocks
18 at you or nothing, but it seems to me when you get
19 somebody new they need to be oriented. Like the well,
20 the water well was tested in April, here it is October
21 and we're just now finding out. The point is
22 information is not being distributed the way it once
23 was. We're waiting months and months and months to get
24 old information. I want to impress upon you, all I

1 hear from Westinghouse and DOE is we want to work with
2 you, we want to communicate with you, but we're not
3 communicating. I don't like old news. I don't think
4 to go to a FRESH meeting and tell my people old news,
5 because when they ask me, well, this well was tested
6 in April and here it is October and you're just now
7 telling me; I get jumped. I don't like that. So, you
8 know, the next -- I'm hurrying. Everybody else had
9 their turn.

10 MR. AVEL: Can I ask you a question?
11 How often does FRESH meet?

12 COMMUNITY MEMBER: You don't know --
13 okay, we meet on the fourth Thursday of every single
14 month except November it's the third Thursday, and we
15 don't meet in December because everybody needs a
16 break.

17 MR. AVEL: Is somebody from the site
18 there?

19 COMMUNITY MEMBER: They did for a
20 while and then there were problems, but Kelly is
21 supposed to be coming back to the meetings starting
22 next Thursday.

23 MR. AVEL: What about if I come?

24 COMMUNITY MEMBER: You can come for

1 the first half hour.

2 MR. AVEL: You're telling me I can't
3 come to tell you what's going on?

4 COMMUNITY MEMBER: No, I'm not telling
5 you that. It depends on who's speaking and what's
6 going on. It's my understanding that Pete Kelly is
7 coming to the November meeting. Westinghouse has been
8 invite and you are more than welcome to attend that
9 one. It will be the third Thursday, though.

10 MR. AVEL: I was suggesting if
11 somebody from the site could come, like myself, and
12 give you an update, a monthly update.

13 COMMUNITY MEMBER: We've asked for
14 that for like the first 15 minutes or a half an hour,
15 we asked for that, so Pete and I have worked out a
16 situation where we will go back to that beginning this
17 month, which is Thursday.

18 My next question is I know the lady
19 back here asked about you know the fact that you're
20 not producing anything at this point and production is
21 down and somebody talked about start up. Do you have
22 an idea of when that's going to happen; are you just
23 sort of on standby?

24 MR. AVEL: Ray, might be able to

1 answer that one.

2 MR. HANSEN: If we do ever go back
3 into metal production, it's going to be a matter of
4 DOE policy; it will be their decision, headquarters
5 decision. What I can tell you, though, is that we are
6 doing everything we think needs to be done to get back
7 into metal production. We don't foresee anything in
8 the near future.

9 COMMUNITY MEMBER: You don't have any
10 quotas that have to be met? .

11 MR. HANSEN: Yes, we do. One of our
12 concerns is that we have all the remediation
13 activities that we need to do plus we also have -- it
14 is still our mission to produce and one of our concerns
15 is that we have of competing for these funds, but once
16 again, we don't ever expect to start anything up
17 unless we know we can do it safely and our priorities
18 are cleanup first.

19 COMMUNITY MEMBER: Westinghouse and
20 their employees are going to be in charge of doing the
21 cleanup work with the assistance of ASI and IT and the
22 other contractors you've identified here?

23 MR. AVEL: DOE is going to be in
24 charge.

1 COMMUNITY MEMBER: So Westinghouse and
2 the rest of these contractors are primarily coming
3 under your direction for the cleanup.

4 MR. AVEL: For the Remedial
5 Investigation study portion of cleanup, but there's
6 more of the cleanup than just that.

7 COMMUNITY MEMBER: The last thing I
8 have, and I would like to ask Bob Owen this. Who is
9 the new -- I plead ignorance on my part here -- who is
10 the new Director of the Ohio Department of Health? I
11 have no idea. Are you?

12 MR. OWEN: Dr. Ronald Fletcher is the
13 Director of the Department of Health. I am the
14 Administrator of a very large program in that
15 department.

16 COMMUNITY MEMBER: Has the Ohio
17 Department of Health had reviews on, you know, uranium
18 and water levels changed any since we've had the well
19 problem in '85? ODH was the one that sent me a letter
20 that said well beneath DOE limits, there are no limits
21 for drinking water, so it's okay.

22 COMMUNITY MEMBER: There's no safe
23 limit but you fall within that classification. You
24 might as well throw it away, it means nothing. It's

1 jibberish.

2 COMMUNITY MEMBER: EPA was telling us
3 not to drink the water; you know where I'm coming
4 from? Have some things changed within the Ohio
5 Department of Health here recently as far as limit for
6 uranium in water? Are you going to abide by EPA's
7 limits, are you going by DOE limits?

8 MR. OWEN: My understanding there is
9 not any existing limits.

10 COMMUNITY MEMBER: But proposed limit,
11 are you going to follow any of those proposed limits?

12 MR. OWEN: We certainly will use that
13 as a guideline obviously, and if that's something
14 that's being proposed, that's certainly throwing up a
15 flag that may well and should be in a document
16 standard. We're not going to preempt EPA and say
17 that's obviously going to have to be the standard, but
18 we will certainly use that as a measuring stick. The
19 levels that we have seen environmentally have not
20 approached that proposed limit.

21 COMMUNITY MEMBER: Oh, yeah, they have.
22 Our previous well water was well over that limit.

23 MR. OWEN: I'm not aware of that. The
24 highest level I thought was measured was 20.

1 COMMUNITY MEMBER: Hours was 190
2 picocuries per liter in the house we used to live in,
3 and that's well over 37 or whatever it was earlier
4 stated. I just -- also is Ohio Department of Health
5 planning on doing anymore water, well water testing or
6 cistern testing? I get called on a regular daily
7 basis wanting to know this. Can I refer them to your
8 1-800 hot line number?

9 MR. OWEN: We certainly welcome any
10 calls, no problem. I'm like Andy, I just arrived two
11 months ago.

12 COMMUNITY MEMBER: Has your
13 Radiological Department been beefed up a little bit in
14 the past two years or so?

15 MR. OWEN: In fact, no, we have not.
16 That is one of the key issues that we are addressing.

17 COMMUNITY MEMBER: Maybe we should
18 talk to Governor Celeste about that. That's all I
19 have.

20 COMMUNITY MEMBER: Perhaps I was a
21 little bit rough on Westinghouse earlier and I would
22 like to say something, that they have improved upon.
23 We drink contaminated water which was 190 times what
24 normal background for over three years. Now since

1 Westinghouse is on the site this last well known to be
2 contaminated the people found out about it within
3 seven months so I think that's an improvement on
4 Westinghouse's part. Thank you.

5 MR. AVEL: There's a significant
6 difference in the wells. The latest ^ well ^ we will
7 was not a drinking water well. It was a well
8 installed for the RI/FS investigation.

9 COMMUNITY MEMBER: I'm glad you
10 brought that up, if no one is drinking from it, they
11 will tell you in seven months, but if you're drinking
12 from it they wait three and a half years.

13 MR. AVEL: To reiterate the point I
14 made earlier year, we're not going to make excuses for
15 past actions, but we're going to do all we can to try
16 to prevent that from happening again.

17 MR. BISCHOFF: Any other questions?
18 Number one, I would like to ask people to please
19 complete an evaluation form and either leave it at the
20 Community Participation table or give it to me and I
21 will give it to the appropriate people before you
22 leave this evening. I would also make the point there
23 are excellent displays in the room. If you have any
24 individual questions, they are happy to try to address

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1 these issues with you. Thank you very much for your
2 effort in being here, your attention, and have a good
3 night.

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PROCEEDINGS CONCLUDED

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C E R T I F I C A T E

I, Lois A. Roell, the undersigned, a notary public-court reporter, do hereby certify that at the time and place stated herein, I recorded in stenotypy and thereafter had transcribed with computer-aided transcription the within one hundred forty-four (144) pages, and that the foregoing transcript of proceedings is a complete and accurate report of my said stenotypy notes.

Lois A. Roell

MY COMMISSION EXPIRES: LOIS A. ROELL

AUGUST 12, 1992.

NOTARY PUBLIC-STATE OF OHIO